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ABSTRACT

This report presents federally mandated evaluations and needs assessments conducted by the Texas Nutrition Education and Training (NET) program during Federal Fiscal Year 1994. General program performance of NET reflected an increase in the number of children in Texas and expansion in NET program activities. Needs assessment data collected from 443 public schools and 41 private schools indicated that nutrition knowledge was, in general, below 70 percent acceptable levels for all populations, and food choices and nutrition practices needed improvement. NET's outreach to food service managers and administrators, teachers, and day care providers is achieved through: workshops developed by NET and delivered by contract trainers; circulation of a NET library collection; development and distribution of instructional and promotional materials on nutrition and food service management; presentations, exhibits, and publications on nutrition education, food service management, and program evaluation; and coordination with related publicly supported programs within Texas. Activities in each of these areas are reported, along with recommendations. An appendix contains evaluation instruments used in NET program outreach. (JDD)

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FINAL EVALUATION REPORT
OF
TEXAS NUTRITION EDUCATION AND TRAINING PROGRAM
FOR
FEDERAL FISCAL YEAR 1994



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TABLE OF CONTENTS

	Page
I. Executive Summary	1
II. Outreach of the NET Program	10
Introduction	10
Workshops	13
NET Lending Library	26
Development and Distribution of Instructional Materials	38
Presentations, Exhibits, and Publications	44
Coordination with Related Publicly Supported Programs	52
Summary	56
Recommendations	57
III. Report on the Project: An Assessment of Nutrition Education and Training Needs in Texas	60
Introduction	60
Awarding the Project's Contract	67
Project Accomplishments in 1993 and 1994	67
Recommendations	70
IV. General Evaluation of the NET Program	71
Introduction	71
Program Resources	72
Program Activities	75
Meta-Analysis of Program Outcomes	77
Results and Discussion	78
Recommendations	80
Appendix	82

LIST OF TABLES

<u>Table</u>	Page
1 Estimate of Workshop and Library Full-Time Equivalent Positions in 1994	12
2 Number and Percent of Participants in NET Workshops Conducted in 1994	16
3 Workshop Participants' Food Programs	24
4 Themes of Materials Circulated in FFY 1994	30
5 Type of Library Materials Circulated in FFY 1994	31
6 Instructional/Promotional Materials Distributed During FFY 1994	42
7 NET Conference Presentations During FFY 1994	46
8 Number and Percent of Participants in Presentations Delivered by NET Contract Trainers	47
9 Function and Facility of Adults Participating in 1994 Presentations	48
10 NET Exhibits and Fairs During FFY 1994	50
11 NET Publications and News Releases During 1994	51
12 Texas NET Program Resources for the Past Nine Years	73
13 Texas NET Program Activities for the Past Nine Years	76
14 Results of Meta-Analysis of Program Outcomes	79

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1 Workshop Participants' Ethnicity	18
2 Facilities of Workshop Participants in the Past Three Years	19
3 Function of Workshop Participants in the Past Three Years	21
4 Training Hours Delivered to Educators and Food Service Personnel in 1994	22
5 Number of Children Reached by Educators and Food Service Personnel	25
6 Monthly Circulation of Library Materials in the Past Three Years	29
7 Viewers/Readers of Circulated Library Materials	32
8 Functions of Library Borrowers in 1994	33
9 Facilities of Library Borrowers in FFY 1994	34
10 Borrower Evaluation of Library Materials in 1994	35
11 Sources of Information About the NET Library in the Past Three Years	37
12 Target Groups Participating in NET Interventions	57

I. EXECUTIVE SUMMARY

The Nutrition Education and Training (NET) program is one of the Child Nutrition Programs (CNP) of the United States Department of Agriculture (USDA). The program was established in 1977 in an amendment to the Child Nutrition Act (Public Law 95-166). States granted NET program funds are required to submit an annual performance report on the numbers of children, educators, food service personnel, Summer Food Service Program (SFSP) sponsors and parents receiving nutrition education and training by NET during the Federal Fiscal Year (FFY), and the number of schools and child care facilities of these target populations. In addition, the states are required to conduct formal evaluations and needs assessments of program activities and use the results as a basis for program improvement and planning. This report includes the evaluations and needs assessments conducted during FFY 1994.

Outreach of the NET Program

NET's outreach to its target populations is achieved through: (a) workshops developed by NET and delivered by contract trainers; (b) circulation of a NET library collection; (c) development and distribution of instructional and promotional materials on nutrition and food service management; (d) presentations, exhibits, and publications on nutrition education, food service management, and program evaluation; and (e) coordination with related publicly supported programs within the State.

Findings

Workshops

In 1994 NET delivered 192 workshops to 4,098 participants. The number of times each workshop was conducted varied from once to 58 times. The total number of participants in the individual workshops ranged from 6 to 1,151. Participation in NET workshops was about two and a half times the participation goal and the number of workshop participants increased 15.7% over the number of participants in 1993. NET did not meet the participation goal set for school populations. In 1994 school populations (612) constituted 14.9% of the workshop participants. The majority of the participants worked

in day care centers (49.9%) and family day homes (30.2%). The ratio of female to male participants was 7:1. Hispanics were the largest group participating in the workshops, comprising 41.7%. African-Americans comprised 19.7%. NET workshops provided 19,575.5 hours of training to 2,610 educators, 1,113 food service personnel, and 177 parents, reaching about 715,650 children.

NET Lending Library

In 1994 the NET library circulated 5,781 items, a 12.9% increase over 1993. The library continued to circulate considerably more audiovisual than printed materials. The dominant theme of circulated items was food service management. The NET library served as a clearinghouse for in-service training courses to school food service personnel. The majority of the items were used in group education and training settings. The number of data base searches conducted by the library (149) increased 8.8% over 1993, and the number of patrons (543) increased 20.7%. Library borrowers reached 29,515 children. They rated over one-third of the items they borrowed as *Excellent* in content, presentation, and usefulness and about half the items as *Good*. Library participation exceeded the goals set for 1994. However, library outreach to child care facilities was far less than its outreach to public school populations.

Development and Distribution of Instructional Material

In 1994 NET revised two workshops and the library print catalog. NET also developed a video, five table tents, and a poster to support *Project 2001/Healthstar*. Another video on the School Breakfast Program (SBP) and a public service announcement (PSA) on nutrition and fitness brought the number of videos developed this year up to three. Two brochures were developed in coordination with Texas Parent Teacher Association (PTA). Two bookmarks with nutrition information were developed to promote the NET library. NET also developed an apple shaped magnet inscribed with the number of the NET hotline. The NET Presentation Evaluation Form, Project 2001/Healthstar Food Service Guide and the script of a Nutrition and the Preschool Child video were translated into Spanish.

The total number of materials distributed was 19,079, a substantial decrease from the previous two years. In 1994 NET discontinued routine mailing of materials to the facilities of workshop participants.

Presentations, Exhibits, and Publications

NET staff gave 8 conference presentations on the NET program, nutrition, and NET program evaluation, 4 of which were given at national conferences. Audiences were approximately 44 educators, 129 food service personnel, and 423 university professors and program evaluators.

The contract trainers delivered 35 presentations to 745 educators, 28 parents, 428 food service personnel and 4 administrators, compared to 32 presentations in 1993. About 76,242 children were reached by the participants. About 40.8% of the participants filled out an evaluation form. Only 28.7% of the respondents indicated that the purpose of the presentation they attended was clear or somewhat clear and 28.9% thought that the presentation was relevant or somewhat relevant to the tasks they perform. NET staff and contract trainers delivered 59 classroom presentations to 1,961 children.

A total of 7 exhibits were held in 1994, compared to 9 in 1993. Exhibit themes were the NET program, careers in nutrition, food service management and nutrition and physical fitness.

Six articles and 2 news releases were published on NET. Two of the articles were on the NET comprehensive needs assessment project, 3 on the NET Library and 1 on the Project 2001.

Coordination With Related Publicly Supported Programs

NET participated actively in the Southwest Interagency Nutrition Group (SWING), the Southwest Region Food and Nutrition Service, the Texas Interagency Council on Nutrition (ICON), the American Cancer Society (ACS), the Texas Affiliate of the American Heart Association (AHA) and the Texas School Food Service Association (TSFSA). NET also coordinated efforts with the Florida NET program, the Texas Education Agency (TEA), the Texas Department of Mental Health and Mental Retardation (TXMHMR), the Texas Department of Agriculture (TDA), the University of Texas at Austin, and the State Agency Libraries of Texas (SALT).

Recommendations

- NET workshops continued to vary considerably in the number of times conducted and number of participants. Statewide scheduling seems to be the major factor in increasing workshop participation. It is recommended that NET strive to achieve

a balance between State and local needs by increasing the number of workshops scheduled statewide.

- Since participation of public school teachers in NET workshops did not reach the anticipated goal for 1994, more efforts should be directed toward meeting the training needs of public school teachers. NET completed a two-year comprehensive assessment of the nutrition education and training needs of public school populations. NET could disseminate the results of the needs assessment to TEA and other organizations involved in teacher training and work with these organizations to meet the needs of public and private school teachers. NET should also promote the workshops in teacher associations, meetings, and periodicals.
- Research indicates that single workshops could result in a change in knowledge, but changes in attitudes and practices are achieved by more extensive instruction. NET may organize its workshops in series around topics of interest to specific target populations. These series of workshops would allow for organizing the content in a spiral curriculum and allow more time to reinforce concepts, provide in-depth training, and evaluation. This organization would also allow more flexibility to meet the needs of participants at different levels of competence and with different time limits at hand.
- Since library items circulated to day care centers and family day homes were relatively few, more library outreach efforts should be directed to these facilities. Promoting nutrition and health to facilities that care for children at an early age is crucial to the realization of NET's goals. NET could develop movable exhibits of samples of suitable materials and combine these exhibits with short presentations delivered at day care centers and training sessions of day home sponsors.
- NET needs to maintain mailed and published information about the library collection as an important source of library outreach. Distributing library catalogs, bibliographies, and updates to schools and child care facilities and publishing articles and announcements in magazines and newsletters was an effective means of library outreach in the past and should continue and expand.
- Since few parents were reached through NET's direct interventions in FFY 1994 and in previous years, it is recommended that NET develop and deliver presentations and handouts for parents. NET should continue efforts to reach parents in PTA meetings and through their children in schools and child care facilities.
- Since NET participates in promotional campaigns such as Texas School Breakfast Week and Texas School Lunch Week, the NET library could prepare packages of audiovisual and print materials to support these campaigns as they are held, and

to provide information to groups and individuals that are interested in learning more about the subjects of the campaigns.

- As the number of NET presentations and exhibits increases, NET needs to continue to develop standard presentations and exhibits to enhance the quality of the presentation. These presentations should be on current topics of interest to NET target populations, as identified in the NET comprehensive needs assessment.
- To reach the few SFSP sponsors in Texas, NET may develop an individualized instruction unit on NET and on basic nutrition concepts that are beneficial to this target population. Simple evaluation instruments should be included in the unit to ensure sponsors' mastery of the unit's content. NET may coordinate the distribution of the unit with the annual training the Texas Department of Human Services (TDHS) provides for the sponsors, and augment the unit with exhibits and brochures.
- NET should continue its enhanced efforts in publications to inform the public of NET program services and share with professionals experiences and ideas on nutrition education and evaluation. Regular announcements on NET activities and services may be negotiated with newsletters aimed at NET target populations.
- NET's diligent coordination with related publicly-supported programs resulted in measurable increases in participation and in contributions state and nationwide. This coordination should continue and should be extended to commodity and food distribution programs, and to related non-profit community organizations.

Report on the Project: An Assessment of Nutrition Education and Training Needs in Texas

In 1992 NET developed a Request for Proposal (RFP) to conduct a three-year comprehensive needs assessment statewide, and is currently directing the project. During the first year, the Delphi technique was used to develop criteria for nutrition education and training in Texas with respect to children, parents, educators, food service personnel, and administrators. The criteria were then used to develop instruments and procedures to collect data on the nutrition knowledge, attitudes, and practices of the school populations and to analyze these data with respect to family income, ethnicity, age, sex, and scholastic achievement.

A representative sample was drawn from Texas schools in the 20 education regions. The instruments and procedures were piloted and revised. Data were collected from 443

public schools and 41 private schools. The sample included 5,210 children, 2,730 parents, 218 teachers, 296 food service personnel and 139 administrators. There were 84 school site visits to collect first hand data.

Descriptive statistics, analysis of variance (ANOVA), Scheffe procedures, Chi-square tests and standardized residuals were computed. Results indicated that nutrition knowledge was, in general, below 70% acceptable levels for all populations. Nutrition attitudes were positive. Food choices and nutrition practices need improvement to meet the Dietary Guidelines for Americans. Food service managers need support in planning and implementing menus in compliance with the Guidelines.

The populations were eating too much fat, saturated fat, cholesterol, sugar and sodium. White children had higher nutrition knowledge scores than African-Americans and Hispanics. White children selected more nutritious foods than Hispanics and Hispanics selected more nutritious foods than African-Americans. There was a significant difference in nutrition knowledge in favor of the children with paid meals. No significant difference was found in attitudes due to family income. Scholastic Achievement correlated positively with nutrition knowledge and practice. Approximately 25% of the children were obese and 9% were anemic.

Food service managers and administrators were more supportive of nutrition education activities than teachers. These groups identified resources and problems related to school food service and nutrition education and training. Teachers, food service personnel and administrators recognized the need to promote nutrition education in the cafeteria.

Few students participated in the SBP. The majority of the students participated in the National School Lunch Program (NSLP), with the exception of 11th graders. The main reason children gave for not participating in the school food programs was not liking the food. In general, parents were satisfied with the meals served at school. The main reason parents gave for dissatisfaction was that the food was not appealing. Some parents complained that the food had too much sugar and starch.

Nutrition and nutrition education topics of interest to the target populations were assessed, as well as preferred methods of receiving information on these topics.

Recommendations

- NET should incorporate the results of the project in its current and future plans and activities; and coordinate efforts with other agencies interested in food and

nutrition and nutrition education and training based on the results of the needs assessment.

- NET should disseminate the results of the first stage of the needs assessment to the ICON members and to other state and community agencies and groups in Texas that are interested in food and nutrition and nutrition education and training.
- States may be awarded periodic grants to specifically conduct comprehensive needs assessments. Apart from funding relatively large research projects, these grants would allow more time for advanced planning and development of the RFP, more time for awarding a contract to conduct the project, and would ensure continuation of regular NET services.
- Texas NET should share the yearly accomplishments of the project and experiences gained with other states to avoid possible duplication of effort and enhance efforts toward better methodologies and outcomes.
- Texas NET should review its past, present, and future needs assessment efforts with the Nutrition and Technical Services Division of the USDA Food and Nutrition Service to ensure that these efforts are within the national framework developed for NET needs assessments.

General Evaluation of the NET Program

The purpose of this study was to assess overall program performance in FFY 1994. The results of the evaluations conducted during the year were combined to produce an index of program effectiveness.

Findings

The NET program budget increased 3.6% over 1993's budget. This increase reflects an increase in the number of children in Texas, and expansion in NET program activities. About 22.2% of the budget was invested in research.

A contract was renewed with the Texas School for the Deaf to package and mail distributed instructional/promotional materials and workshop curricula. NET awarded 25 contracts to trainers to deliver workshops and participate in workshop development and material evaluation. One contract was awarded to an independent contractor, to

translate instructional materials into Spanish. The contract with Texas Tech University (TTU) to conduct a needs assessment was renewed for a third year.

The vote-counting method of meta-analysis was applied to integrate results of the evaluation of program activities in 1994. Results of the analysis revealed an overall positive impact of the NET program in Texas. Twelve evaluations were positive, and three outcomes were negative. The negative results were due to possible lack of coordinating teacher training with TEA, shortage in knowledge of teacher training needs, and change in material distribution policy. Two of the outcomes were neither better nor worse than last year.

Recommendations

- Few of NET activities are directed toward promoting use of the cafeteria as a learning laboratory. NET may develop presentations and materials for use in the cafeterias and for reinforcing, in the classroom, knowledge and attitudes gained from these activities.
- Since NET is expanding its efforts commensurate to budget increase, it is recommended that nutrition education and training services target parents of small children, due to the important role they play in their children's knowledge, attitudes, and behaviors.
- Related to the previous recommendation, NET should continue the function of a clearinghouse and a consultant to organizations, facilities, groups, and individuals on nutrition education and training in general, and on best practices in the field.
- NET may recruit the contract trainers in consulting workshop participants as they apply the knowledge and skills gained from the workshops in their work environments. Similar services could also be provided to schools, child care centers, day homes, and parents in general.
- The mini-contracts to school districts were successful in previous years in providing educational activities and instructional materials tailored to school populations. NET should continue this type of activity and share the outcomes of these mini-contracts with the rest of Texas school districts.
- Since NET is expanding its interventions and strategies, there is an emerging need for measuring the relative cost-effectiveness of various interventions and alternative

strategies. Emphasis should be placed on more successful and cost-effective interventions and strategies.

- There is a need to direct more efforts toward measuring the quality of NET's services and follow-up with necessary improvements.

II. OUTREACH OF THE NET PROGRAM

Introduction

Background

NET is one of the USDA child nutrition programs. The program was established in 1977 in an amendment to the Child Nutrition Act (public law 95-166). The USDA administers the program through grants to state agencies. The NET program supports the other USDA child nutrition programs; namely, the NSLP, the SBP, the Special Milk Program (SMP), the Child and Adult Care Food Program (CACFP), and the SFSP. With the exception of the NSLP and SBP for public schools in Texas, the rest of these programs, including NET, are under the jurisdiction of TDHS. They are administered by the Special Nutrition Programs (SNP) section of the Client Self-Support Services division.

States granted NET program funds are required to submit an annual report--the FNS 42--reporting the number of educators, food service personnel, SFSP sponsors, and parents receiving nutrition education and training during the fiscal year, and the number of schools and child care facilities of these target populations. Effective FFY 1993 the report has to include data on the contracts and grants awarded by a State program. The report must be completed within 90 days after the close of the FFY in order for the state to receive the program grant for the succeeding year. In addition, states are required to conduct formal evaluations and needs assessments of program activities and use them as a basis for program improvement and development. This report includes the evaluations and needs assessments of program activities implemented during FFY 1994.

Goal of the NET Program

The goal of the NET program is to promote optimal health and well-being of the nation's children through improved nutrition. To achieve its goal, the NET program provides nutrition education and instructional resources for children and for key individuals in the learning environments of children. Parents or guardians, caregivers and teachers, as well as food service personnel who prepare meals for the children, are considered individuals who affect the nutritional status of Texas children and contribute to children's nutrition knowledge, attitudes, and behaviors.

Four goal areas were identified in NET's State Plan Update For 1994. They are:

1. Assure that children have opportunities to learn about and to practice good eating habits in schools and child care facilities participating in USDA's child nutrition programs. This goal area is achieved by providing education and instructional materials for children, teachers, and food service personnel.
2. Facilitate integration of effective nutrition learning activities--including use of the cafeteria as a learning laboratory--into instruction at all grade levels from preschool through high school. This goal area is achieved by providing information and instruction to help teachers improve their child nutrition related knowledge, attitudes, and behaviors.
3. Assure that nutritious, appealing, and safe meals and snacks are served in schools and child care facilities. This goal area is achieved by providing information and training to help food service personnel improve their child nutrition related knowledge, attitudes, and behaviors.
4. Provide support for nutrition education and food service management practices in schools and child care facilities participating in the reimbursement programs. This goal area is achieved by developing educational materials, keeping the lending library collection current, acquiring and distributing materials, and coordinating services with other public-sector agencies interested in promoting children's health and well-being through improved nutritional status.

In order to assure that the Texas NET program reaches as much of the target population as possible, annual participation goals are set for each of the program's major activities and for each of its target populations. Goals are based on current priorities, current staffing, and prior participation figures. Actual participation is monitored and compared against the goals for the year. Information about goal attainment then is used to establish objectives and make plans for the following year.

Goals for NET's Outreach

Data about staffing levels and participation in FFY 1985 were used as a baseline in setting goals for 1994. Using 1985 as the baseline is appropriate because all of the designated NET staff positions were filled during that year and evaluation studies demonstrated that the program was both challenging and successful.

During 1985 there were approximately 6 full-time equivalent NET staff positions that supported NET workshops and 2.5 positions that supported the NET lending library. The

staff-to-participant ratios were 1:400 for NET workshops and 1:1500 for the NET lending library.

FFY 1994 witnessed a relative stability in program staffing. The staff consisted of a Program Coordinator, a Program Evaluator, a Workshop Coordinator, a Project Coordinator, a Librarian, an Information Specialist, a Workshop Assistant, a Library Assistant, and a Secretary. In addition to the NET staff, NET contracted with 25 Trainers to deliver NET workshops throughout Texas and to evaluate instructional materials. Three of the trainers, however, left the program at different times during the second half of the year. Thus, the number of full-time trainers is estimated to be 24. Following is an estimate of NET's workshop and library full-time equivalent positions in 1994.

Table 1

Estimate of Workshop and Library Full-Time Equivalent Positions in 1994

Intervention	Position	Full-Time Equivalent
Workshops	Workshop Coordinator	1.00
	Contract Trainers	2.16*
	Workshop Assistant	<u>1.00</u>
	Total	4.16
Library	Project Coordinator	0.50
	Librarian	1.00
	Material Evaluator (Contract Trainers)	0.20
	Library Assistant	<u>0.75</u>
	Total	2.45

*Note: Estimate is based on amount of money used for trainers' contracts divided by the annual salary of comparable TDHS trainers. Only about 85% of the contract trainers' time was devoted to workshops.

Thus, there were approximately 4.16 full-time equivalent staff positions in support of the workshops and 2.45 staff positions in support of the library. By substituting these figures in the staff-to-participant ratio, overall goals were set for FFY 1994 at 1,664 individuals participating in NET workshops and 3,675 individuals for the library.

Information about program priorities was used in adjusting the goals for different target groups. The 1990-1991 State Plan indicated that approximately 40% of NET's efforts would be directed at public school populations and 60% at other target populations. A 1994 amendment of this State Plan did not change NET priorities. Accordingly, the goal for workshop participants was set at 666 for public school populations and 998 for other populations. The goal for library circulation was set at 1,470 individuals for public school populations and 2,205 individuals for other populations.

NET's Outreach Interventions

NET's outreach to its target populations is achieved through multiple interventions which include:

- Workshops developed by NET staff/contract trainers and delivered by contract trainers
- Circulation of the NET library collection
- Development and distribution of instructional materials on nutrition education and food service management
- Presentations, exhibits, and publications on nutrition education, food service management, and NET program evaluation
- Coordination with related publicly supported nutrition programs in the State

Following are NET's efforts to reach Texas children through each intervention and the outcomes of these efforts.

Workshops

Introduction

Conducting nutrition education workshops to prevent disease and enhance the well-being of the State's children is a major activity of the NET program. The NET program provides information and resources to instruct educators, food service personnel, parents

and sponsors of SFSP and day home providers. NET's information and resources are mainly on the fundamentals of nutrition and how to convey this information to motivate children to make healthy food choices. The expected outcomes are improved nutritional status for children and reduced food waste in schools and child care facilities.

NET has developed a total of 25 workshops since 1985, and continued to offer all NET workshops until 1993. In 1993 NET decided to offer a limited number of workshops to increase participation in individual workshops and enhance workshop efficiency. The workshops offered were selected on the bases of their popularity in previous years and relevance to the largest number of NET target populations. Consequently, 5 workshops were offered in addition to a *Train the Trainer* workshop for NET contract trainers. Workshop topics included nutrition education, food service management, menu planning, and sanitation. Contract trainers conduct the workshops throughout Texas and provide free materials to eligible participants. Participants receive certificates verifying hours of attendance.

In 1986 interagency agreements and curriculum modifications were negotiated to obtain the approval of TEA for two NET workshops to be made available to public school teachers for advanced academic training (AAT). Two additional workshops were approved by TEA for AAT credit in 1988. In 1992 further negotiations with TEA resulted in a general agreement that all NET six-hour workshops are automatically approved for AAT credit. These agreements are positive steps toward increasing workshop participation.

Method of Evaluating the Workshops

Continuous evaluation of NET workshops resulted in revisions and improvements of the content of these workshops, as well as in the methods and materials used in their delivery. The performance of workshop participants is evaluated using knowledge tests and attitude scales. In some instances, the behavior of the participants is evaluated as well. For example, the menus planned by food service personnel were evaluated before and after their participation in the *Menu Planning and Kitchen Economy* workshop to find out if their compliance with the CACFP regulations increased as a result of their participation.

Data on the effectiveness of a workshop as a whole are collected from the workshop participants using a standard workshop evaluation form. In addition, the performance of the contract trainers is observed and evaluated periodically by NET staff using a

workshop instructor evaluation form. Copies of the workshop evaluation form and the instructor evaluation form are included in the Appendix of this report.

Data on the number of workshop participants and their functions, work facilities, ethnic backgrounds, and the number of children they reach, are collected on each workshop for administrative purposes and to evaluate workshop participation. A registration form is used to collect these data. A copy of the registration form is included in the Appendix.

Workshop Participation

Workshops Conducted

A total of 192 workshops were conducted in FFY 1994, compared to 225 workshops in FFY 1992 and 193 workshops in 1993. Thus, the number of workshops conducted in 1994 was almost the same as 1993 and 14.7% less than 1992. The decrease in the number of workshops conducted in 1993 and 1994 from those conducted in 1992 may be partly due to transferring some of NET workshops to presentations delivered by NET contract trainers. This transfer occurred when workshops did not include enough participant/workshop activities or when participants requested a short version of a workshop that did not allow time to conduct participant/workshop activities. Estimate of staff to participant ratio, however, was adjusted to account for presentation delivery. This was done by reducing the workshop full-time equivalent positions by 10%. Table 2 contains the titles and durations of workshops conducted during FFY 1994, as well as the number and percent of workshop participants.

Table 2

Number and Percent of Participants in NET Workshops Conducted in 1994

Workshop	Workshop Duration in Hours	Number of Times Conducted	Number of Participants	Percent of Participants
Guidelines for Selecting Creditable Foods and Beverages	4.0	58	1,151	28.1
Nutrition and the Preschool Child	6.0	55	1,138	27.8
Sanitation and Health	5.0	39	943	23.0
Puppets use Forks Too: Puppetry in Nutrition Education	4.0	22	476	11.6
Off to a Good Start	6.0	15	326	8.0
Obesity	6.0	1	39	1.0
Food Fun	4.0	1	19	0.5
Planning Nutritious Snacks	4.0	1	6	0.1
TOTAL	40.0	192	4,098	100.0

Table 2 shows that the duration of the workshops ranged from 4 to 6 hours. The number of times each workshop was conducted varied from once to 58 times. The workshop conducted the most was *Guidelines for selecting Creditable Foods and Beverages*, followed closely by *Nutrition and the Preschool Child*. These workshops were revised in 1994 and were the only workshops scheduled statewide during this year. These two workshops were designed to provide educators, food service personnel, parents and day home sponsors of preschool children with nutrition information and guidelines on USDA meal patterns.

Three other workshops followed the workshops mentioned above in the number of times conducted. These include *Sanitation and Health*--conducted 39 times, *Puppets Use Forks Too*--conducted 22 times, and *Off to a Good Start*--conducted 15 times. All five workshops except *Sanitation and Health* were directed to preschool populations. The

Sanitation and Health workshop is one of NET's first and most popular workshops. It was developed to provide food service personnel with guidelines to ensure that safe food is prepared and served.

Participation in each of the five workshops was proportional to the number of times conducted. The average participation in each workshop ranged from 20 to 24, with the highest average participation in *Sanitation and Health* and the lowest average participation in *Guidelines for Selecting Creditable Foods and Beverages*. Participation in the other three workshops that were conducted once varied considerably from 6 to 39.

A *Train the Trainer* workshop was delivered once during FFY 1994 to enhance knowledge and skills of NET contract trainers. The workshop lasted for 2 half-days and 1 whole day.

Workshop Participants

As mentioned above, the number of workshops conducted in 1994 was almost the same as 1993 and 14.7% less than the number conducted in 1992. In 1994 the number of workshop participants increased 15.7% from their number in 1993, indicating an increase in the number of participants in individual workshops.

It was stated previously that the workshop participation goal for 1993 was set at 1,664. Actual participation in NET workshops (4,098 participants) was about two and a half times the participation goal. But, since both the number of workshops conducted and the number of participants attending NET workshops decreased in 1994 compared to 1992, without similar decreases in budget or staffing, NET needs to consider possible improvements in the workshops and/or workshop scheduling and promotional procedures.

Participants' Sex and Ethnicity

To ensure equitable distribution of NET services to some extent, workshop participants are asked to indicate their sex and ethnicity in addition to their function and facility. Considering the fact that the majority of food service personal and educators are females, it is not surprising that 264 of the participants were males and 3,802 were females, a ratio of 1:7. Figure 1 illustrates the number of participants from each of the ethnic groups.

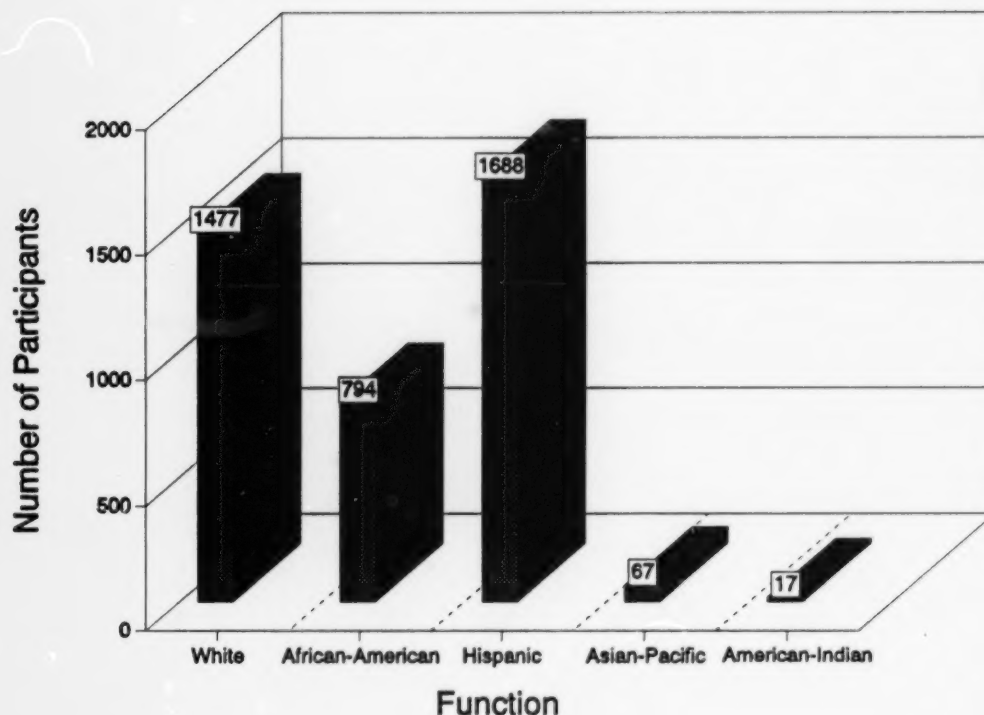


Figure 1. Workshop Participants' Ethnicity

Figure 1 shows that Hispanics were the largest group participating in NET workshops, comprising 41.7%. African Americans comprised 19.7%. Both these groups participated in numbers greater than their actual representation in the population. In Texas, Hispanics comprise about one quarter of the population and African Americans comprise approximately 12 percent. Other factors considered however, such as poverty level and eligibility for participation in the CNP, justify this level of participation by these two groups.

Participants' Facilities

As mentioned above, NET's goal was to direct 40% of its efforts to public school populations and 60% to other targeted populations. To assess the achievement of this

goal, the work facilities and the functions of workshop participants were studied. Figure 2 represents the different facilities of workshop participants in 1992, 1993, and 1994.

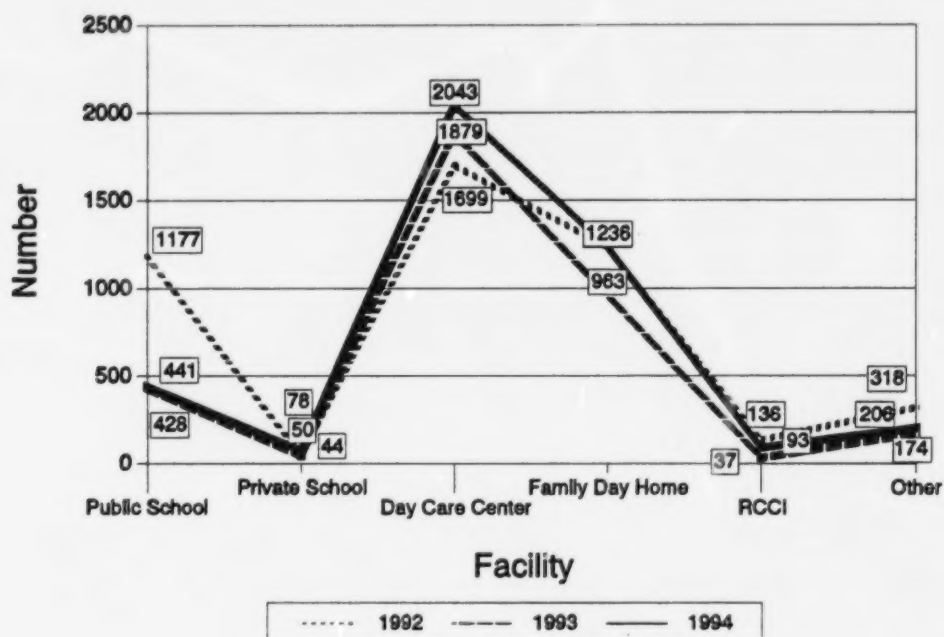


Figure 2. Facilities of Workshop Participants in the Past Three Years

Figure 2 indicates that a general participation trend prevailed in the past three years. Participants from day care centers and registered family homes were reached more than participants from public or private schools. This trend is a continuation of a trend that started in previous years and prompted a regulation in 1989 as to the proportion of participants from school population and from other population (40:60). In 1992, the increase in the number of participants who worked in public schools was greater than the increase in participants from day care centers or family day homes. This shift in trend was in the desired direction. However, in 1993 and 1994, the number of participants from public schools dropped to less than half their number in 1992, indicating a need to increase efforts to reach public school populations.

Shortage in teacher training funds for travel and substitute teaching may have discouraged public school teachers from participating in NET workshops in the past two years.

Participation of food service personnel in the *Sanitation and Health* workshop in 1992 (27% of total workshop participation) offset the decrease in teacher participation. The *Sanitation and Health* workshop drew 22.2% of the participants in 1993 and 23.0% in 1994, yet it still lagged behind the puppetry workshop scheduled statewide in 1993 and *Guidelines for Selecting Creditable Foods and Beverages* and *Nutrition and the Preschool Child* scheduled statewide in 1994. These three workshops are geared toward preschool populations.

There were 441 participants from public schools in 1994, compared to an anticipated goal of 666 participants. Thus, NET did not meet the anticipated goal. NET's efforts toward attracting public school populations should continue by offering workshops that target these populations and scheduling these workshops statewide. NET may also consider enhancing coordination efforts with the education service centers, and coordinating teacher training with similar training provided by TEA.

Participants' Functions

Figure 3 shows the different functions the participants performed in their work facilities in the past three years.

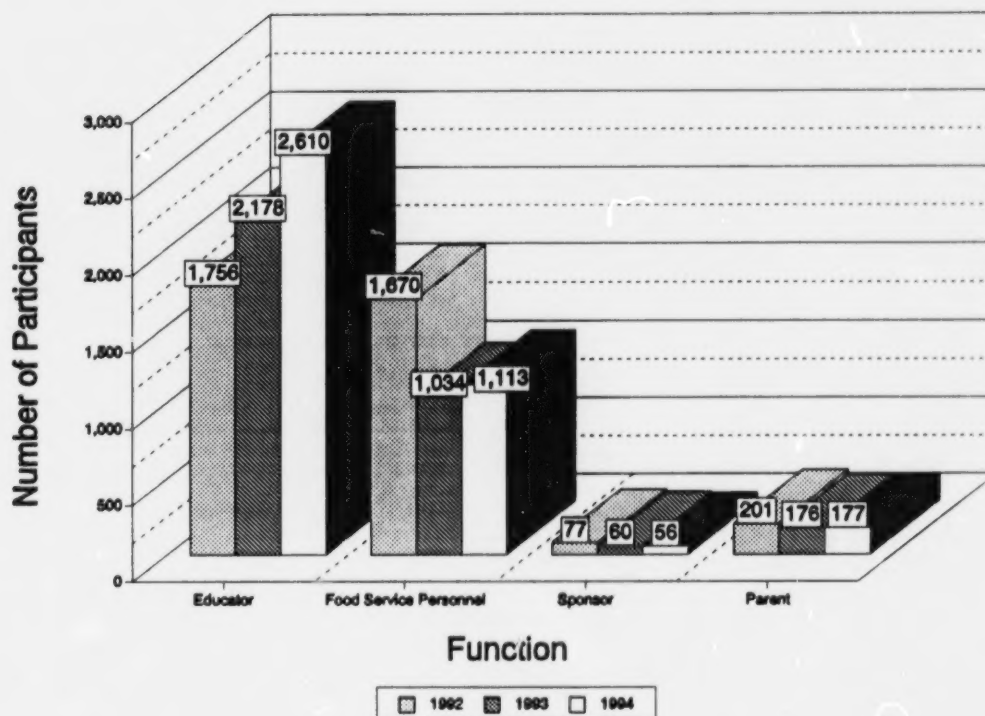


Figure 3. Function of Workshop Participants in the Past Three Years

Data in Figure 3 reflects shifts in the numbers of participants performing different functions from one year to another. In 1992 the number of educators decreased 15.4% from their number in 1991, while the number of food service personnel increased 74.1%. In 1993 and 1994 the number of educators rose 24.0% and 48.6% respectively, yet the number of food service personnel dropped 38.1% and 33.4%. Most of the 1993 and 1994 participating educators worked in child care facilities. This shift in the function of participants from one year to another coincides with the type of workshop scheduled statewide in a particular year. When the *Sanitation and Health* workshop--tailored to food service personnel, was scheduled statewide in 1992, there was an increase in food service personnel participating in NET workshops. When the puppetry workshop was scheduled statewide in 1993, there was an increase in child care educators. In 1994, *Guidelines for Selecting Creditable Foods and Beverages* and *Nutrition and the Preschool Child* boosted the numbers of child care educators.

Starting in 1993, NET is required to report the number of SFSP sponsors receiving instruction. Revision in the workshop registration form included an item asking the participants whether or not they were SFSP sponsors. Three hundred eighty six participants (9.4%) answered in the affirmative. The actual number of SFSP sponsoring organizations in 1994 was 254 serving food in 1,513 sites. More than one individual participated from each organization.

Hours of Training

Figure 4 illustrates the number of hours of training delivered to educators and food service personnel in schools and child care facilities in 1994.

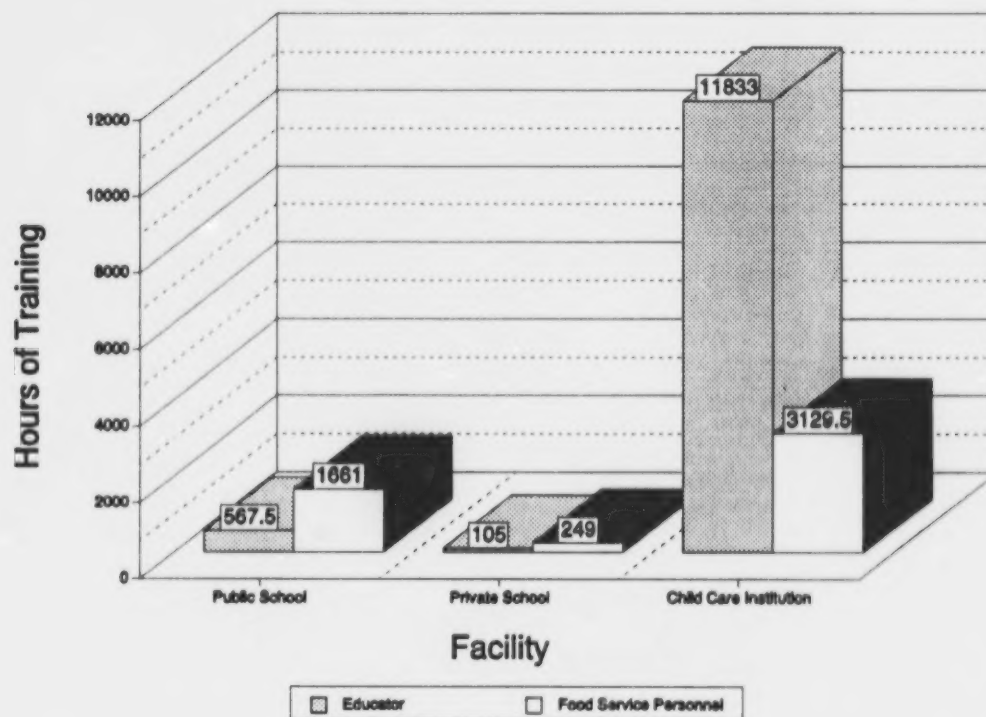


Figure 4. Training Hours Delivered to Educators and Food Service Personnel in 1994

Figure 4 shows a difference in the number of training hours delivered to educators and to food service personnel in schools and child care facilities. Food service personnel in public and private schools received more training hours than educators in these schools. The number of training hours delivered to child care educators, on the other hand, was more than 20 times the hours delivered to public school educators, more than 7 times the training hours delivered to school food service personnel and more than three and half times (3.78 times) the training hours delivered to food service personnel in child care facilities.

Two reasons may have caused the increase in school food service training relative to school educators. The American School Food Service Association (ASFSA), TSFSA, and TEA encourage continued education and certification of food service personnel. NET actively coordinates efforts with these organizations and participates in their meetings and conferences. Thus, NET reached school food service personnel directly and indirectly. NET needs to direct similar efforts to reach school teachers.

The total hours of training delivered in 1994 (19,575.5) was 16.7% more than that of 1993 (16,777.4). This increase reflects the overall increase in the number of workshop participants.

Participation in Food Programs

The NET program was designated to support the other USDA child nutrition programs. Information on the food programs implemented in the facilities of workshop participants is a measure of NET's effect on these programs. Table 3 lists the number and percent of workshop participants who indicated their facilities' participation in the different food programs.

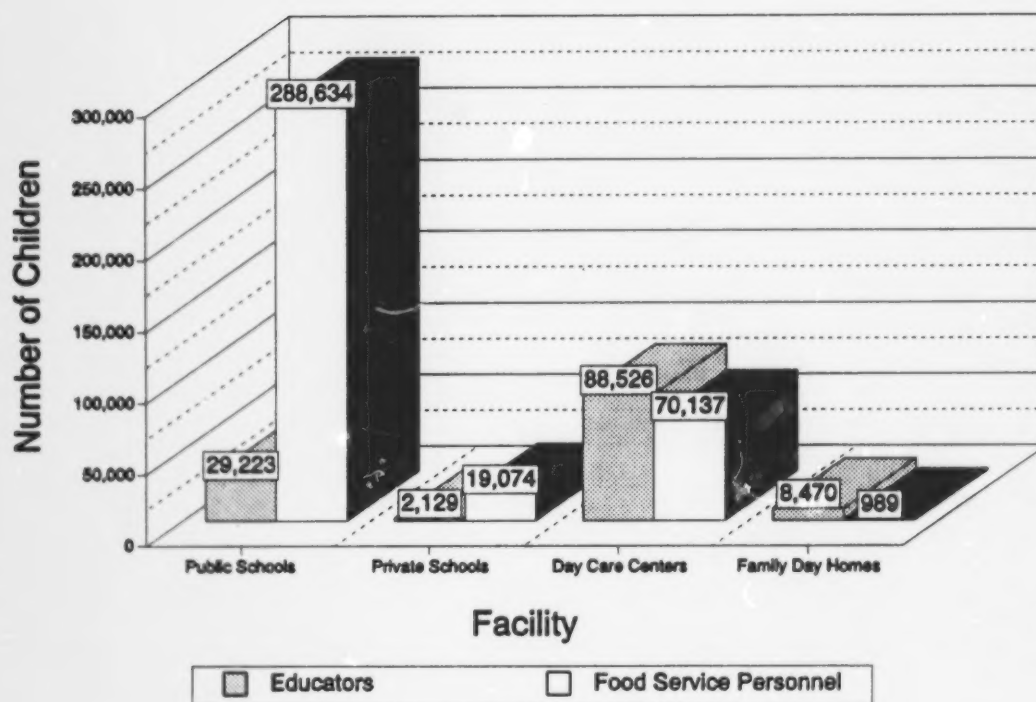
Table 3**Workshop Participants' Food Programs**

Food Program	Number of Participants	Percent of Participants
CACFP	3,031	77.8
SBP	437	11.2
NSLP/SBP	163	4.2
SMP	88	2.2
SFSP	18	0.5
More than 2 food programs	3	0.1
NSLP	3	0.1
None	154	3.9
TOTAL	3,897	100.0

It is apparent from Table 3 that the facilities of the majority of workshop participants (77.8%) participated in the CACFP. This is because the majority of workshop participants worked in child care facilities. Only 3.9% of the workshop participants indicated that their facilities did not participate in any food program.

Children Reached Through Workshop Participants

Figure 5 shows the number of children reached through educators and food service personnel in 1994.



*The same children may be reached by more than one participant.

Figure 5. Number of Children Reached by Educators and Food Service Personnel

Figure 5 shows that the number of children reached by school food service personnel exceeded the number of children reached by school educators due to the difference in the number of children reached by individual participants in these two groups. More school food service personnel participated in NET workshops as well. On the other hand, the number of children reached by educators in child care facilities was more than the number of children reached by food service personnel, as more educators than food service personnel from these facilities participated in NET workshops. Thus, it seems reasonable to assume that workshops are a viable means of reaching children indirectly, and that increasing workshop participation has a direct effect on the number of children reached.

Net Lending Library

Introduction

The NET lending library is one of the key elements in the Texas State Plan for promoting children's health and well-being through improved nutrition. The library collection includes over 4,000 printed and audiovisual materials on nutrition, nutrition education, and food service management. In FFY's 1993 and 1994 materials in Spanish and children books were boosted in the collection. Children materials in the library collection include 367 different titles 78 (21.3%) of which were purchased during the past two years. The library acquired 32 Spanish titles in the past two years, increasing the Spanish collection 47.8% over previous years. The collection was weeded and new items were added. The new items were evaluated by registered dietitians to make sure that the collection remains a source of up-to-date, well presented, and useful information. Circulation of this collection provides children, parents, educators, food service personnel, and others who are interested in child nutrition and nutrition in general with ready access to materials to teach nutrition and to plan and prepare nutritious meals.

In addition, use of the lending library by other state agencies and public programs has at least two added advantages: (1) it increases the NET program's outreach, and (2) it reduces the probability of duplicate development or acquisition of materials on nutrition education. Thus, improved coordination of the NET library services assures more efficient use of federal and state resources allocated to support child nutrition and health.

Circulation of the NET library collection is managed by a full-time NET program librarian and a librarian assistant. Requests to borrow items from the collection are made by mailing an order form, by calling, or by using an 800 telephone number dedicated to the NET program. Materials are delivered and returned by post or parcel service for borrowers who are located outside Austin, while those who are located in Austin have the option to check out and return materials in person. Borrowers are strongly urged to insure items at full value when returning them to the library so that the risk of loss in transit is minimized. However, other than the cost of return postage and insurance, use of the lending library is free of charge.

Since March 1993 the NET library moved to a more spacious location that accommodates the expanded library collection and allows for improved facilities. Library facilities include a room equipped for video, slide or filmstrip preview, two reading tables to review print materials, and a special corner for children. The children's corner contains materials suited for children such as puppets, games, models, and books.

Method of Evaluating the Lending Library Participation

Data on library performance and circulation are accumulated using a library feedback form. The form consists of items that are intended to collect information on the borrower's function and work facility, how the item was used, and the borrower's evaluation of the item. The form is revised periodically to improve the accuracy of collected data. A copy of the form is included in the Appendix of this report.

The library feedback form is provided to borrowers with each circulated item. Borrowers are urged to fill out the form and return it with the borrowed item. Since the library feedback form is filled out and submitted after using the items, only about 44.1% of the borrowers returned the form with the borrowed items in the past year. In 1991 a follow-up procedure was developed to remind the library borrowers to return the feedback form to collect more accurate data on material circulation.

Due to the nature of library services, and the way borrowed library items were used in 1994 and in previous years, participants who attended presentations that were based on materials borrowed from the library were considered participants in the NET program.

Efforts to Promote the Library Outreach

In order to increase circulation and provide services to NET's wide range of target populations, the NET library initiated several new activities. Since December 1992 lists of new additions to the library collection were mailed quarterly to patrons who used the library in the past two years. Information on the library and a bibliography of sample library materials were mailed as part of a NET outreach package to school food service personnel, school superintendents, PTA presidents, child care centers, day home sponsors, and contractors of the breakfast, lunch and special milk programs.

In August 1993 the audiovisual materials catalog was revised. In August 1994 the printed materials catalog was revised. To make them more user friendly, the catalogs were divided into five chapters based on suitability of material to different target populations. The five chapters are: (1) child care--which includes materials on subjects such as feeding, nutrition, hygiene, menu planning, and prenatal care; (2) elementary--which includes materials on subjects such as digestion, cookery, exercise, and weight control; (3) high school--which includes materials on subjects such as sports nutrition, eating disorders, obesity, and pregnancy; (4) food service--which includes materials on subjects such as food safety and sanitation, quantity cookery, kitchen operations, and management

techniques; and (5) general adult--which includes materials on subjects such as basic cookery, healthy diets, fitness, weight management, aging, and diabetes.

In 1993 a slide-tape presentation was developed on the library collection and library services. The presentation was used in NET workshops and conferences during FFY 1994. In addition, two articles were published about the NET library and information on the library was provided in NET exhibits and presentations. To promote children's material and increase children's participation, a story time for children was initiated.

Lending Library Participation

Material Circulation

In 1994 a total of 149 data base searches were conducted by the NET librarian for NET library patrons compared to 100 searches in 1992 and 137 in 1993. A vacancy in the librarian position, which lasted for two months in 1992, resulted in a drop in library searches during that year. Five hundred forty-three patrons used the library in 1994 compared to 450 in 1993 and 357 in 1992. The 20.7% increase in the number of patrons in 1994 and the 26.1% increase in their number in 1993 was due to the exceptional efforts mentioned above to promote the library. Walk-in patrons increased from about one a week to over one a day, bringing in-house use to 452 items. Figure 5 illustrates monthly circulation of the library collection during the past three years.

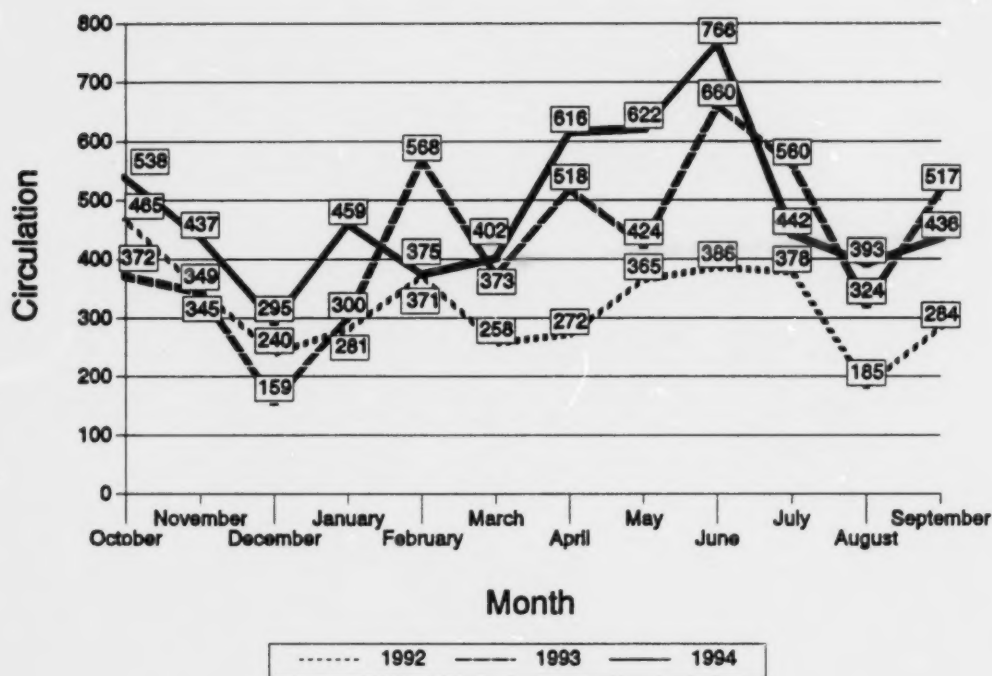


Figure 6. Monthly Circulation of Library Materials in the Past Three Years

It is apparent from Figure 6 that overall circulation of the library is on the rise from one year to another in spite of monthly fluctuations. The total library circulation increased from 3,832 items in 1992, and 5,120 items in 1993 to 5,781 in 1994. The increase in library circulation in 1994 was 12.9% over 1993 and 50.9% over 1992.

The busiest time for library circulation is during the months of October, February, April, May, June, and July. This time coincides with accelerated school activities and food service training. Circulation is relatively slow during the rest of the year, especially in December and August, which allows time for planning and development.

Themes of Circulated Materials

Table 4 lists themes of circulated library materials in the order of their circulation in 1994.

Table 4**Themes of Materials Circulated in FFY 1994**

Theme	Frequency	Percent
Food Service Management/Training	939	39.7
General Nutrition	451	19.1
Preschool/Elementary Nutrition Education	225	9.5
Children's Materials	189	8.0
Child Care Health and Nutrition Information	183	7.7
General Cookery	153	6.5
Secondary Health Education	143	6.1
Physical Fitness/Sport Nutrition	62	2.6
Elderly Health Education	18	.8
TOTAL	2,365*	100.0

* Note. Total number of completed feedback forms.

As shown in Table 4, the main theme of the circulated library materials in 1994 was food service management/training, the theme of about 40% of the library items circulated in 1994 and the previous two years. The NET library served as the clearinghouse for in-service training courses provided by TEA and TSFSA to food service personnel.

As mentioned above, NET initiated a children's story time in 1994 to promote the use of children's books. This effort boosted the use of children's books from 3.7% of the circulation in 1993 to 8.0% in 1994.

Types of Circulated Materials

Table 5 lists types of circulated materials in the order of their circulation in 1994.

Table 5

Type of Library Materials Circulated in FFY 1994

Type of Material	Frequency of Circulation	Percent
Videotape	1,845	79.0
Book	248	10.6
Curriculum Guide	77	3.3
Children's Books	58	2.5
Film	36	1.5
Filmstrip	28	1.2
Slides	20	.9
Teaching Aid	11	.5
Audiotape	6	.3
Reference	5	.2
TOTAL	2,334	100.0

As Table 5 indicates, videotapes constituted the majority (79.0%) of circulated materials in 1994. This same trend was dominant in previous years. Book circulation, improved from 5.9% of the circulation in 1993 to 10.6% possibly due to updating and distributing the print catalog in 1994. Using the NET library as a clearinghouse for relatively expensive and rare audiovisual materials emphasizes the important role the NET library plays in the area of nutrition education and training.

Use of Circulated Materials

Figure 7 shows who viewed or read borrowed library items.

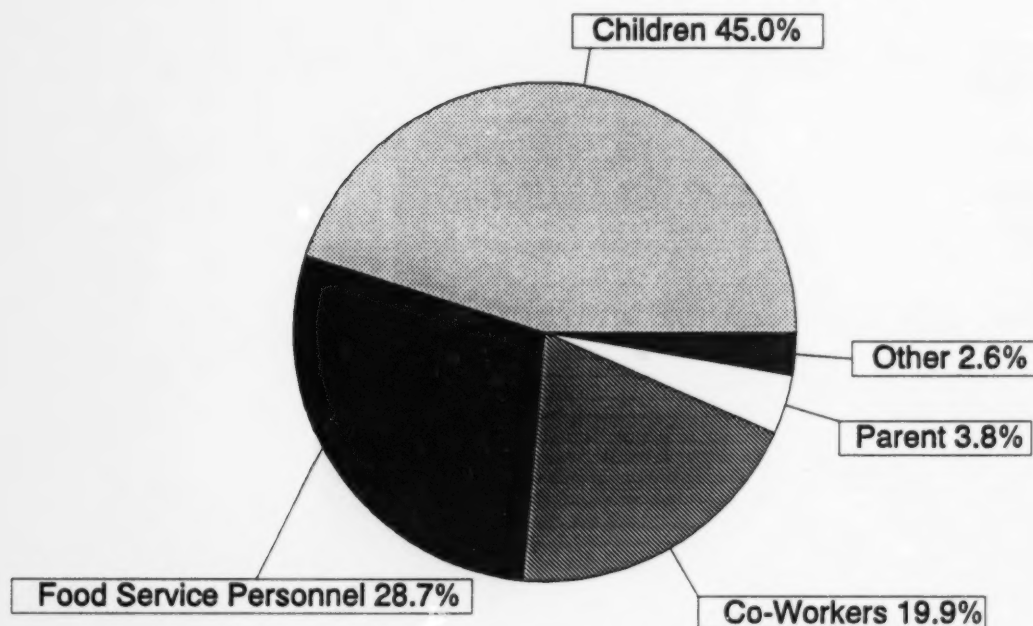


Figure 7. Viewers/Readers of Circulated Library Materials

The information in Figure 7 supports the assumption that borrowed library materials were used by the borrowers to educate/train other individuals. Children (45.0%) and food service personnel (28.7%) topped the list of those who viewed or read the borrowed materials. Using borrowed library materials in group settings considerably increases NET outreach and the cost benefits of NET library services. Other groups who benefitted from the NET library were educators, parents, college students, patients, and providers, in that order. Only 2.2% of the borrowers used the materials themselves.

Functions of Library Borrowers

Figure 8 shows the main function of library borrowers.

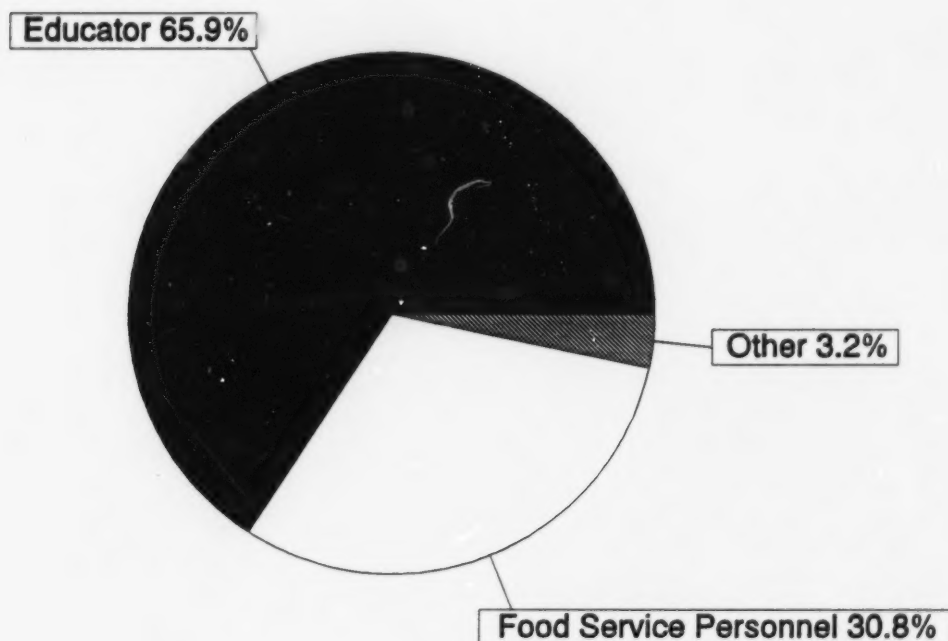


Figure 8. Functions of Library Borrowers in FFY 1994

Figure 8 indicates that the majority of library borrowers were educators (65.9%) and food service personnel (30.8%). Other borrowers were mainly parents, college students, and food program sponsors. Thus, it is plausible to assume that the NET library is used mostly by NET target populations; namely, educators, food service personnel, parents, and food program sponsors.

Work Facilities of Library Borrowers

Information on the work facilities of library borrowers is useful in planning library outreach. This information points to the facilities that have already been reached and need follow-up and updates, and the facilities that were not reached and may be unaware of library services related to their function. Figure 9 represents work facilities of the library borrowers in 1994.

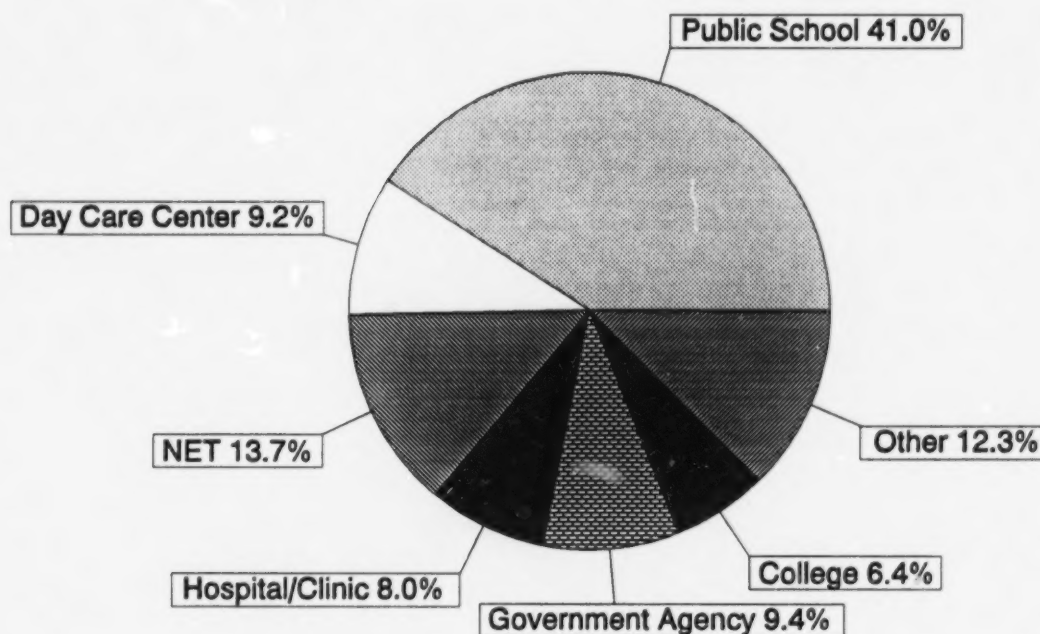


Figure 9. Facilities of Library Borrowers in FFY 1994

Figure 9 shows that the most frequent borrowers (41.0%) worked in public schools. The percentages of borrowers from day care centers (9.2%) and day homes (2.2%) rose from 10.6% in 1993 to 11.4% in 1994, indicating increased efforts to reach these facilities and a need to continue these efforts. The rest of the circulated materials were used in other NET interventions and by government agencies, hospitals and clinics, colleges, elderly care, associations and airlines. The 1994 goal for library participation was set at 3,675

individuals--1,470 for public school populations, and 2,205 for other populations. The number of children reached by educators and food service personnel in public schools was over 9 times the goal set. The number of public school educators was 430 and the number of food service personnel was 12,735. On the other hand, the number of children reached in child care facilities was 1,834, the number of day care providers was 691, and the number of food service personnel was 148. Thus, a total of 2,673 individuals were reached from child care facilities, exceeding the goal of 2,205. Library outreach to child care facilities, however, was far less than its outreach to public school populations.

Evaluation of Borrowed Library Materials

The library feedback form included items that asked the library borrowers to rate the content of the materials they borrowed, the way the content was presented, and how useful the materials were to those who saw it. Figure 10 shows these ratings.

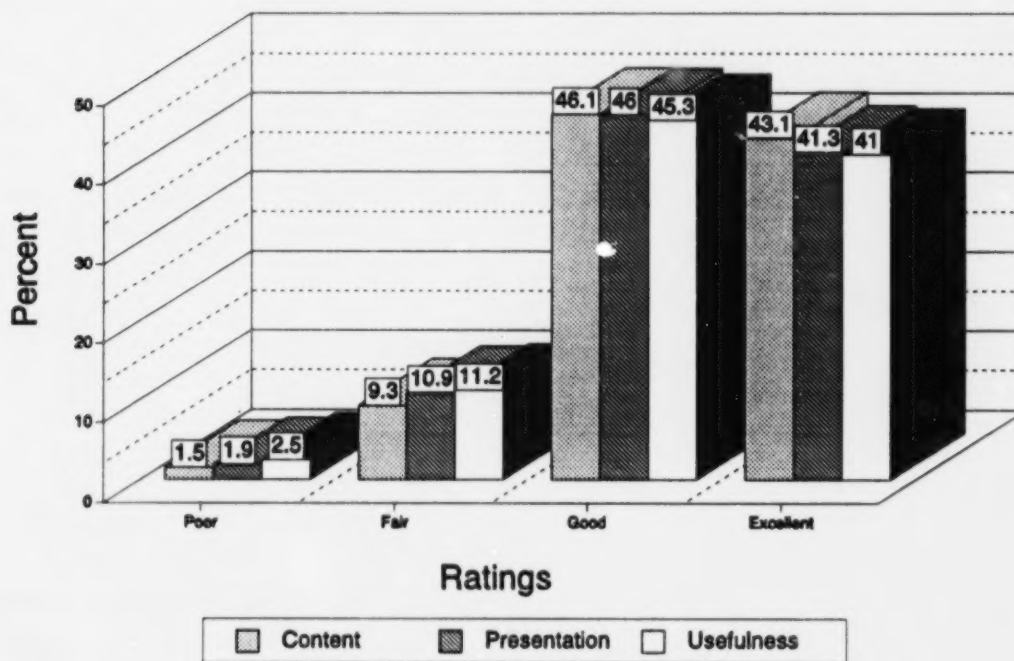


Figure 10. Borrower Evaluation of Library Materials in 1994

Figure 10 illustrates that between 43.1% and 41.0% (over one-third) of the circulated library collection was rated *Excellent* in content, presentation, and usefulness. About half of the circulated materials were rated *Good* in content, presentation, and usefulness (46.1%, 46.0%, and 45.3% respectively). Less than 2.5% of the circulated materials were rated *Poor* in either content, presentation, or usefulness. The reason for these relatively high ratings may be due to the process followed in evaluating library acquisitions. NET contract trainers review each item and evaluate it before adding it to the collection, using an evaluation form that consists of both open ended and scaled items. The Appendix of this report contains a copy of the NET Library Material Evaluation Form. In addition, the entire collection is evaluated periodically and outdated items are purged. Thus, the quality of the borrowed items should encourage library borrowers to continue using the library, and the themes of the library collection seem to suit children and other target populations in schools and child care facilities.

Sources of Information About the NET Library

To encourage use of the collection, a catalog of printed materials and another catalog for audiovisual materials were compiled in 1984. Since the collection is in constant updating and growth, a revised audiovisual catalog was compiled and produced in 1990 and a revised catalog of printed materials was compiled and produced in 1992. As mentioned above under "Efforts to Promote the Library Outreach," another audiovisual catalog was compiled and produced in 1993, and another print materials catalog was produced in 1994. In 1994, 1,934 copies of the catalogs were distributed to schools and child care facilities, about three times the number of catalogs (655) distributed in 1993. Library acquisitions (479) were 49.2% more than 1993 acquisitions.

Figure 11 shows how library borrowers knew about the NET library and its services in 1994.

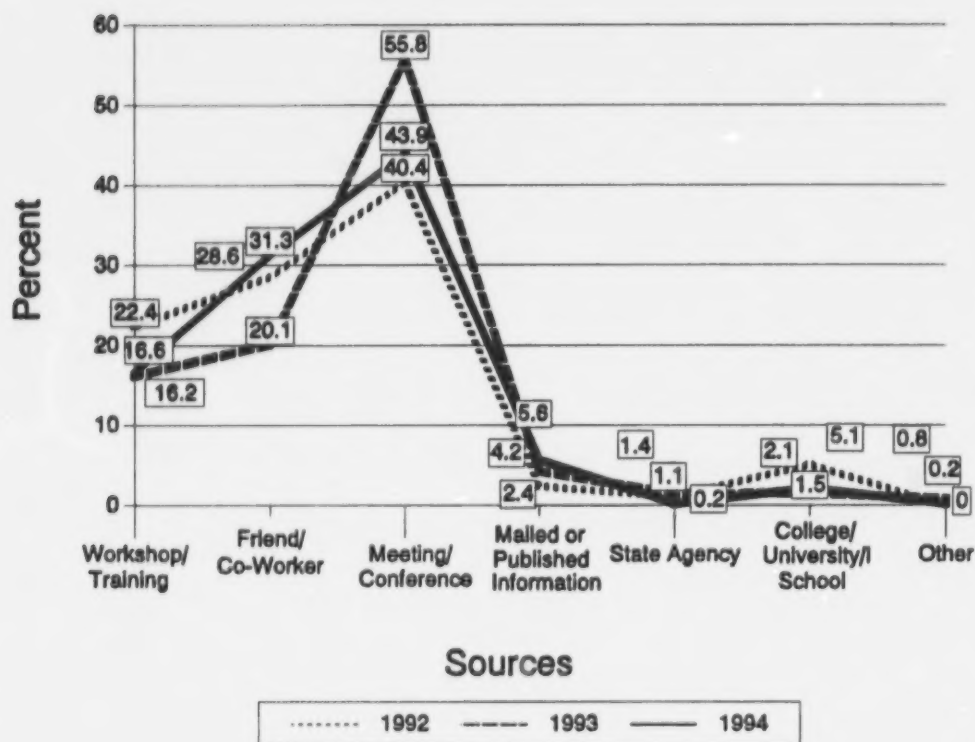


Figure 11. Sources of Information About the NET Library in the Past Three Years

It is apparent from Figure 11 that in the past three years professional meetings were the most frequent source of information about services of the NET library, followed by borrower's friend or co-worker, followed by information the borrowers received in workshops and other forms of training. In 1994 the number of library borrowers who knew about the library from meetings and conferences they attended decreased, while mailed or published information increased. Other sources of information fluctuated but remained basically similar to 1992 and 1993.

To continue to enhance library outreach to target groups in schools and child care facilities, NET should continue to publicize its library services in professional meetings. In 1994 more efforts were directed to mailed or published information by distributing library catalogs and writing articles and announcements about the library in periodicals and newspapers. Presentations on library services and reviews of new or basic library items that are available for specific groups or organizations, especially to day care centers

and family day homes, should continue as avenues to extend the library services to these groups.

The Effect of Coordination With TSFSA On Library Circulation

Early in 1990 NET and TSFSA agreed to use the NET library as a major clearinghouse for all training certification courses delivered statewide to members of TSFSA during the months of July and August. The NET library, in return, received a stipend to purchase new videotapes and add them to its collection. This coordination of efforts resulted in an increase in NET library circulation of food management/training materials since 1990.

As a result of the successful coordination between NET and TSFSA, a similar agreement occurred between these two agencies in FFY 1994. The NET library provided TSFSA with a list of materials on food management/training and helped clarify the content and use of these materials by providing appropriate annotations. TSFSA reviewed these materials and identified the items that would be useful in their summer certification training. TSFSA also provided the NET library with a list of additional materials to be purchased with library funds, to support the TSFSA training.

The total number of feedback forms returned by users of the NET lending library in FFY 1994 was 2,365. Seventeen per cent of these forms were completed by participants in food service training compared to over one-third of these forms in 1993. This could be due to the overall increase in library distribution in 1994.

Development and Distribution of Instructional Materials

Introduction

As a relatively small program, NET relies heavily on ready-made instructional materials in nutrition education and food service management. However, NET's efforts in education and training are not limited to information dissemination. Curricula for 25 workshops were developed and revised regularly during the past 10 years to meet the recent advances in knowledge and methods of instruction, and to increase content congruence with Federal and State policies and regulations.

In addition to workshop curricula, regular evaluations of NET activities pointed to needs to develop certain instructional materials such as recipes, cycle menus, brochures, and handouts. Some of these materials were translated into Spanish to meet the needs of the large Hispanic population in Texas. Coordination with other nutrition and public health programs also resulted in identifying needed instructional materials.

Generally, when ready-made instructional materials were not available to realize NET's goals and objectives, the NET staff developed needed instructional materials or revised and adapted available materials. Sometimes, NET's contract trainers participated in material development. When development efforts required skills, equipment, and/or time beyond staff boundaries, NET contracted with other public or private institutions for development of the desired material.

Material Development

Workshops

Two workshops were revised in FFY 1994: *Guidelines for Selecting Creditable Foods and Beverages*, and *Nutrition and the Preschool Child*.

The *Guidelines for Selecting Creditable Foods and Beverages* workshop was developed in 1992. It targets contractors and program monitors of child care facilities participating in USDA child nutrition programs. It provides participants with information about the USDA meal patterns, creditable foods, and *USDA Food Buying Guide for Child Nutrition Programs*. The workshop lasts 4 hours. The main topics of the workshop are: (a) how to plan nutritious meals which meet the meal pattern requirements of the USDA Child Nutrition Program, (b) nutrition labeling, (c) the *USDA Food Buying Guide for Child Nutrition Programs*, and (d) creditable foods and beverages.

The *Nutrition and the Preschool Child* is one of the first workshops to be approved by TEA for AAT in 1986. The workshop targets preschool teachers and child care staff involved in curriculum planning at facilities participating in one or more of the USDA child nutrition programs. The workshop lasts 6 hours. It provides knowledge on how to prepare and conduct appropriate nutrition education lesson plans and cooking activities for preschool children based on their nutrition needs, behaviors and preferences.

Instructional/Promotional Materials

In 1992 NET developed a two-hour presentation titled *Project 2001: Nutrition for a New Century*. The purpose of the presentation is to inform school food service personnel, educators, and administrators about the benefits of this Project. *Project 2001* was developed and is being implemented by the Southwest Region Food and Nutrition Service to promote implementation of the revised USDA *Dietary Guidelines for Americans* in the schools of the Southwest Region. The presentation included transparencies and a set of slides that was developed by the Missouri NET program. Participants received a copy of the USDA *Dietary Guidelines for Americans* brochure, a copy of the USDA *Food Guide Pyramid*, and a handout which provides basic information about the Project. In 1993 NET developed a 6 minute 40 second video on the Project and a food pyramid table tent to be included in the presentation package. NET also developed a brochure to promote the Project and translated it into Spanish.

In 1994 NET started to integrate Project 2001 with Healthstar, a similar project developed by the Texas affiliate of the AHA. A 7 minute *Project 2001/Healthstar* video was developed, with an introduction by Dr. Rodney Henry, president of the Texas affiliate. The video was an edited version of the Project 2001 video developed in 1993. NET also developed a Healthstar 11" X 17" four color poster titled *Energize*. Five tabletents on Project 2001 were developed to support the project. The topics of the tabletents were: (a) Whole Grains, (b) Vegetables, (c) Fresh Fruit, (d) Meats and (e) Dairy.

In 1991 coordination with TEA identified the SBP and breakfast in general as a priority area in need of development and promotion in Texas. The NET program agreed to participate in efforts to develop and distribute materials to promote breakfast to children of all ages. NET, with the help of TDHS media services, developed two PSAs during 1991. One of the PSAs was directed to elementary school students and the other was directed to teenagers. A poster and two menu-backs were developed to support the PSA targeting elementary school students.

In 1992 a videotape titled *Breakfast Advantage* was developed as a continuation of these efforts. The videotape targets school administrators and food service personnel. It lasts for 6 minutes and presents information on the importance of breakfast and the SBP. Two additional menu-backs and two costumes were developed to support the PSA developed for elementary school students. The costumes were designed after the Earl E. Bird cartoon character in the PSA. A two-minute audiotape titled *Breakfast Jingle* was also developed to promote breakfast to elementary school students. In 1993 NET augmented these materials with two additional Earl E. Bird costumes.

In 1994 NET and TEA developed a 10 minute video titled *Closing the Performance Gap with School Breakfast*. The video addresses the advantages of the SBP as viewed by five Texas School superintendents.

Two brochures were developed in coordination with Texas PTA. The first brochure Targets Children and is titled: *Texas Children - Eating Right, Feeling Great with Texas PTA and Texas NET*. The second brochure targets educators and is titled: *Texas Children - Eating Right, Feeling Great with Texas NET and You*.

In addition, NET developed a 30 second PSA titled: *Nutrition Fuels Fitness*. The PSA was distributed to 85 network affiliated broadcasting stations in Texas as part of the National Nutrition Month campaign.

As mentioned in the library section of this report, several materials were developed to promote the library in 1993. These materials included a slide/tape presentation on the library collection and services, a revised audiovisual catalog, and seven topic bibliographies. In 1994 NET revised the print materials catalog and developed two library bookmarks featuring nutritional information.

To provide information on the NET program in general, the NET Nutrition Hotline was initiated in 1992 and upgraded and transferred to NET's new location in 1993. Callers were able to access the Workshop Coordinator directly. Call receivers were able to transfer incoming calls to any SNP staff member if the caller requests information that is better provided by that staff member.

In 1994 two additional lines were added, one for workshop contract trainers to reach the Workshop Coordinator directly, and the other for workshop participants to get a list of weekly scheduled workshops and their locations. An apple shaped magnet inscribed with the NET hotline number was developed to promote the hotline.

The NET Presentation Evaluation Form, Project 2001/Healthstar Food Service Guide and the script of a *Nutrition and the Preschool Child* video were translated into Spanish.

Material Distribution

Each workshop participant received a material package that included the workshop workbook and the handouts that were used during the workshop. In addition, NET produced copies of instructional materials that were developed by NET or other sources and distributed these materials, upon request, to NET target populations and other

individuals, groups, or organizations interested in nutrition and nutrition education. Table 6 lists the instructional/promotional materials NET distributed in 1994.

Table 6

Instructional/Promotional Materials Distributed During FFY 1994

Material	Number
Brochures	
Anorexia/Bulimia	50
Breakfast	150
Fat Facts	250
Project 2001	73
Texas NET	26
Food Guide Pyramid	460
Total Brochures	1,009
Catalogs & Bibliographies	
Audiovisual Materials Catalog	1,414
Print Materials Catalog	495
Food Service Catalog	25
Bibliography on Training and Development/Resources for Food Service Personnel	150
Bibliography of New Library Materials	2,600
Total Catalogs & Bibliographies	4,684
Handouts	
1-800 Stickers	500
Breakfast	150
Daily Food Guide Pyramid	520
Ethnic Recipes for CCC's and FDH's	1
Fat Calculators	125
Fat Facts	250
Food Guide Pyramid Table Tent	483
Ideal Body Weight	200
National Nutrition Month Book Marks	200
NET Library Book Marks	200
Total Handouts	2,629

Material	Number
Information Packets	
Eating Disorders	250
NET Workshops	154
Project 2001	660
Total Packets	1,064
Outreach Letters	
To School Food Service on Project 2001	850
To Child Care	767
To Texas TSFSA	1,085
To Texas PTA	1,500
To Educators/Superintendents	1,300
Total Outreach Letters	5,502
Videos	
2001: Nutrition for a New Century	1
Nutrition Fuels Fitness PSA	85
Total Videos	86
Workshop Packets	
Guide for Selecting Creditable Foods and Beverages	1,152
Nutrition and the Preschool Child	1,139
Sanitation and Health	944
Puppets Use Forks Too: Puppetry in Nutrition Education	478
Off to a Good Start	328
Obesity	39
Food Fun	19
Planning Nutritious Snacks	6
Total Workshop Curricula	4,105
TOTAL	19,079

Table 6 indicates that NET produced and distributed 41 instructional/promotional materials. A variety of the distributed materials (videotapes, audiotapes, brochures, handouts) were designed to directly instruct children in nutrition and good eating habits. In addition, recipe cards, menus, and food regulations were distributed to help food service personnel plan nutritious meals. Several brochures and information packets were

developed and distributed to promote the NET program and its services. Catalogs and bibliographies were distributed to promote the NET library collection.

As mentioned above, each workshop participant received a material packet that included the workshop workbook and handouts used during the workshop. Thus, 4,098 workshop packets were distributed to workshop participants. Outreach letters were mailed to administrators of schools, child care facilities, food service managers, and food program contractors to inform them of the NET program and its services. Bibliographies of sample library materials and workshop and presentation synopses were attached to the letters.

In 1993 the total number of distributed materials was 800,426, about 25 times the number of materials distributed in 1992 (32,021). The increase in the number of distributed materials was due mainly to lunch bags and outreach letters initiated in 1993. In 1994 NET distributed 19,079 materials, a substantial decrease from the previous two years. The reason for this decrease was the type of material distributed and a change in workshop policy. NET concentrated on distributing packets of information and stopped routine mailings of materials to the facilities of workshop participants.

Presentations, Exhibits, and Publications

Introduction

Presentations, exhibits, and publications are developed and delivered by the NET staff and contract trainers and are used to: (a) publicize the program and its services, (b) increase participation of the target populations, and (c) promote exchange of ideas and information with concerned professionals.

Starting in 1992 an increasing number of presentations and exhibits were sponsored by NET and delivered by the contract trainers in their respective locations. NET enlisted the contract trainers in these efforts to save on travel money while accelerating the number of presentations and exhibits delivered throughout Texas. Standard exhibits and presentations are being developed to provide contract trainers with the necessary information and materials. NET also purchased three movable exhibit boards that can be folded and shipped to different presentation and/or exhibit sites.

A standard form was used to collect data on participants in presentations delivered to adult audiences. Two items on the form were designed to find out if the purpose of a presentation was clear to the participants and if the content was relevant. Another form was used to collect data on children participating in classroom presentations. Copies of these two forms are included in the Appendix.

Presentations

Table 7 lists titles of presentations that were given by NET staff in conferences, their locations, dates, and the groups that attended these presentations.

Table 7**NET Conference Presentations During FFY 1994**

Presentation	Conference	Duration	Location	Date	Audience
Assessing Educational Needs within and between Diverse populations	Annual National Conference of the American Evaluation Association	20 min.	Dallas, Texas	November 4, 1993	Researchers, Program Evaluators
Texas NET: Statewide Resources/National Network	37th Annual TXMHR Food Service Management Conference	30 min.	Austin, Texas	March 29, 1994	Food Service Managers, Program Specialists
NET	All-Well Conference	Three 30 min.	San Marcos, Texas	June 7, 1994	Public School Teachers
Nutrition Education and Training Program Evaluation	Annual National Conference of the Society for Nutrition Education	2 hours	Portland, Oregon	July 18, 1994	Educators, Program Administrators
Puppetry in Nutrition Education	Annual National Conference of the Society for Nutrition Education	2 hours	Portland, Oregon	July 19, 1994	Educators, Program Administrators
A Comprehensive Assessment of Nutrition Education and Training Needs Assessment	Annual Conference of the National Association for Welfare, Research and Statistics	30 min.	Austin, Texas		Researchers, Program Administrators

Data in Table 7 indicate that a total of 8 presentations were given to different target populations and professional groups. Presentation topics included the NET program, nutrition, and program evaluation. Four of these presentations were given in national

conferences compared to 5 in 1993. An estimated 44 Public school teachers, 129 food service managers and 423 university professors and program evaluators attended these presentations.

As mentioned in the "Material Development" section of this report, NET developed a two-hour presentation on *Project 2001: Nutrition for a New Century*, sponsored by the Southwest Region Food and Nutrition Service, to promote implementation of the revised USDA *Dietary Guidelines for Americans*. In 1994 NET contract trainers delivered this presentation and several other presentations that they modified from NET workshops or developed anew. A total of 35 presentations were delivered to educators, parents, food service personnel and administrators, compared to 32 in 1993. Table 8 lists these presentations and the number and percent of participants.

Table 8

Number and Percent of Participants in Presentations Delivered by NET Contract Trainers

Presentation	Number of Times Conducted	Number of Participants	Percent of Participants
Early Childhood Nutrition	4	523	40.4
Summer Food Service	1	200	15.4
Project Teach	5	132	10.2
Nutrition and Fitness	5	119	9.2
Introduction to NET	6	94	7.2
Project 2001	5	94	7.2
Food Fun	1	35	2.7
Obesity in Children	1	23	1.8
Cooks Nook	1	21	1.6
Education for Self Responsibility	1	20	1.5
Dietary Guidelines for Americans	2	17	1.3
Factors in Menu Planning	1	8	.6
Nutrition Education and Puppetry	1	7	.5
Finding the Fat in Your Food	1	5	.4
	35	1,298	100%

Table 8 indicates that presentations on early childhood nutrition were attended the most (40.4% of the participants) followed by a summer food service presentation (15.4%). The range of presentation topics varied widely. The number of participants in each presentation ranged from 5 to 200 participants. Variation in topics and participants is expected, since these presentations were customized and delivered upon request.

When the presentation participants were asked about the number of children they reached, a total of 76,242 children was mentioned. About 16.7% of these children were reached by educators and 38.4% were reached by food service personnel. Table 9 lists the functions and facilities of the participants.

Table 9

Function and Facility of Adults Participating in 1994 Presentations

Facility	Function				Total
	Educator	Food Service Personnel	Parent	Other	
Public School	26	211	8	2	247 20.5%
Private School	17	1		1	19 1.6%
Day Care Center	129	12	1	1	143 11.9%
Family Day Home	11		2		13 1.1%
Head Start	562	4	17		583 48.4%
Summer Food Program Program Sites		200			200 16.5%
TOTAL	745 61.8%	428 35.6%	28 2.3%	4 .3%	1,205 100%

Table 9 indicates that presentations were delivered to 26.2% more educators than food service personnel. The majority of educators (92.8%) worked in head start programs and

day care centers. School food service personnel and summer food service program personnel, were 96.0% of the total food service personnel. As in the case of NET workshops, preschool educators and school food service personnel constituted the majority of the participants. Thus the contract trainers reached NET target populations by their presentations even though very few parents and family day home providers were reached.

The presentation evaluation form included items asking the participants to rate the clarity of the purpose of the presentation and the presentation relevance to their jobs. About 40.8% of the participants filled in this form. Only 28.7% of the respondents thought that the purpose of the presentation they attended was clear or somewhat clear and 28.9% thought that the presentation was relevant or somewhat relevant to the tasks they performed, indicating a need to improve the quality of these presentations.

In addition to presentations delivered to adult audiences, the NET staff and contract trainers gave 59 classroom presentations, a 68.6% increase over 1993. The majority of these presentations (89.8%) were given to public school children. One of the remaining presentations was given to a day care center and 6 were given to preschool children as story time in the NET library. Presentation topics included information on the Food Guide Pyramid, health, and physical fitness. The total number of children participating in the presentations was 1,961.

Exhibits

Table 10 includes a list of exhibits and fairs that NET held during FFY 1994.

Table 10**NET Exhibits and Fairs During FFY 1994**

Exhibit/Fair	Theme	Date
Health Fair Texas Department of Mental Health/Mental Retardation Austin, Texas	NET Library	October 1, 1993
Career Day United South High School Laredo, Texas	Careers in Nutrition	February 8, 1994
Health Fair Mendez Middle School Austin, Texas	Nutrition and Health	March 11, 1994
Health Fair Amarillo Discovery Center Amarillo, Texas	Nutrition Fuels Fitness	March 12, 1994
37th Annual Conference on Nutrition and Food Service Management Texas Department of Mental Health/ Mental Retardation University of Texas at Austin Austin, Texas	Texas NET Statewide Resources	March 29, 1994
Health and Fitness Festival Jackson Intermediate School Pasadena, Texas	Nutrition and Fitness	April 20, 1994
Annual Convention of Texas School Food Service Association Dallas, Texas	Nutrition and Food Service Management	June 13-15, 1994

Table 10 indicates that NET participated in 7 exhibits and fairs, compared to 9 in 1993 and 7 in 1992. Two of these exhibits were held statewide. In 1991 the Texas State Plan set the goal for the number of exhibits and fairs to be held by NET at five. The updated 1993 State Plan did not change this number. Thus, NET exceeded the set goal.

Publications

Table 11 includes a list of NET's publications in FFY 1994.

Table 11

NET Publications and News Releases During 1994

Title	Publications	Date
Early Bird Appearance	The Dallas Morning News	October, 18, 1994
Texas NET Has Nutrition Answers	Food Journal, Texas Association of Community Action Agencies, Inc. Volume 7, Number 21	November 5, 1993
NET Library	etc.; The monthly newsletter for TDHS State Office Employees	March, 1994
What our Children are Eating	Vista, Lubbock Avalanche Journal	March 27, 1994
What's New in the Texas NET Library ?	Lunch Bell, Texas School Food Service Association Volume 37, Number 3	Spring, 1994
Lufkin SFSA announcement on Earl E. Bird visit during Texas School Lunch Week	Lunch Bell, Texas School Food Service Association Volume 37, Number 4	Summer, 1994
Project 2001: Nutrition for a New Century	Lunch Bell, Texas School Food Service Association Volume 37, Number 4	Summer, 1994
What are Children Eating?	Human Sciences, Texas Tech University Volume 13, Number 2	Fall, 1994

Data in Table 11 reveals that 6 articles and 2 news releases were published on NET in 1994 compared to only 3 articles in 1993. Two of the articles were written on the comprehensive needs assessment that is being conducted by TTU and sponsored and directed by NET. Three articles were on the NET library and 1 on Project 2001.

Coordination With Related Publicly Supported Programs

Introduction

Coordinating efforts of the NET program with those of other publicly supported programs with similar functions is based on NET program regulations and is a program goal. This coordination is expected to promote outreach of the NET program and to reduce duplication of efforts and resources.

Coordination efforts take different forms. NET continues to attend and present program outcomes at state and national professional meetings. This interaction allows communication and exchange of information on NET's planned activities and possible avenues of cooperation with other programs. Another direct approach to coordination is submitting proposals for cooperative efforts and offering consultations that are in the realm of NET's expertise. Presentations, exhibits, and publications publicize NET's activities and expertise and open doors for cooperation and coordination.

Coordination Efforts

Southwest Interagency Nutrition Group

NET participates in meetings of SWING, a partnership made up of representatives from the Food and Nutrition Service of the USDA, the Administration for Children and Families, the United States Public Health Service, and State agencies that are engaged in the delivery of food service and/or nutritional care intervention, including nutrition education, to mothers, children, and families. The mission of the group is to promote better nutrition for all families in the Southwest Region through facilitating the implementation of nutrition recommendations developed by the Maternal and Child Health Interorganizational Group (MCHING) at the December 1990 Conference, "Call to Action: Better Nutrition for Mothers, Children, and Families."

Southwest Region Food and Nutrition Service

As mentioned previously, NET coordinated efforts with the Southwest Region Food and Nutrition Service to promote and implement *Project 2001: Nutrition for a New Century*. In 1992 NET developed a two-hour presentation to inform school food service personnel, educators, and administrators about the benefits of this Project. In 1993 NET augmented the presentation with a 6-minute 40-second video on the Project and a food pyramid table tent. NET also developed a brochure to promote the Project and translated it into Spanish. Three mini-contracts were awarded to school districts to develop innovative nutrition activities on *Project 2001* and the new USDA *Dietary Guidelines for Americans*. NET trainers presented *Project 2001* in training sessions delivered by SNP trainers to NSLP contractors in October and November 1992. NET also collaborated with Region 6 and Region 13 Education Service Centers in presenting the project to food service personnel attending training on the revised USDA *Dietary Guidelines for Americans*.

In 1994 NET started to integrate Project 2001 with Healthstar. A 7 minute "Project 2001/Healthstar" video and a poster were developed. NET also developed 5 table tents on foods promoted by the project.

Florida NET Program

The Florida and Texas NET programs combined efforts to translate the Nutrition and the Preschool Child workshop materials and video into Spanish. The workshop was developed by the Florida NET Program and is used in Texas.

Texas Interagency Council on Nutrition

ICON, formerly the Nutrition Resource Council, was established as a major statewide cooperative linkage between food and nutrition policy stakeholders as a result of NET's efforts in 1990. The ICON members meet quarterly. The NET Coordinator chaired the Council in 1992 and 1993 and worked with other ICON members to develop a Memorandum of Understanding between the agencies represented by ICON. The Memorandum was issued and implemented in 1993. NET also printed 300 copies of *A Guide to State Agency Nutrition Programs* developed by the Council.

In 1994 NET continued to participate in ICON's quarterly meetings. The NET Coordinator was a member of the Administrative subcommittee which was responsible for planning the meeting agenda. She also served as chair of the Food Distribution Subcommittee.

The American Cancer Society

In 1992 NET staff were invited by the ACS's Public Education Committee to help plan nutrition education activities statewide for preschool through high school children. The NET Project Coordinator was a member of the Texas Cancer Council Task Force curriculum development project, "Planting the Seed to Good Health." The NET Coordinator was an active member of the ACS's Nutrition Task Force. NET kept its active participation in the society's quarterly meetings during 1994.

Texas Affiliate of The American Heart Association

In 1992 NET expertise was sought by the Texas affiliate of the AHA school site subcommittee. The subcommittee was tasked to review and make recommendations regarding the *Getting to Know Your Heart* curriculum designed for elementary school students in grades 1-3. The AHA donated copies of their curriculum and training packages to the NET library. NET purchased additional copies for the contract trainers to be used in NET workshops. The trainers were trained on the curriculum as a step toward offering statewide presentations on using the curriculum. In 1993 NET scheduled six presentations statewide and the presentations were delivered by NET contract trainers. NET also continued to serve on the Schoolsite Subcommittee. As mentioned previously, NET is currently planning to merge Project 2001 with the AHA's Health Star, a project also designed to help schools implement the Dietary Guidelines.

Texas School Food Service Association

Early in 1990, coordination with TSFSA designated the NET library collection as a major clearinghouse for all certification courses delivered to members of this association. This coordination was renewed in 1991, and NET agreed to purchase audiovisual materials to support the certification training statewide. Coordination efforts continued through 1993 and 1994 when NET participated in the School Breakfast/Lunch Week activities of TSFSA.

Texas Education Agency

In 1992 NET and TEA coordinated their activities in a breakfast promotion campaign. NET developed two PSAs, one targeting elementary school students and another targeting teenagers. A poster, two costumes, and two menu-backs were developed to support the PSAs. As part of this campaign, NET produced the *Breakfast Jingle* audiotape and a

Breakfast Advantage videotape in cooperation with TEA and Associated Milk Producers, Inc.

In 1993 several meetings were held between NET and the Child Nutrition staff of TEA to discuss possible areas of coordination. NET developed two additional "Earl E. Bird" costumes. In addition, NET and TEA coordinated their efforts during the TSFSA National School Breakfast/Lunch Week, Texas School Lunch Week, and Texas School Breakfast Week. NET also disseminated about 750,000 breakfast bags developed by TEA to promote school breakfast during the Texas School Breakfast Week.

In 1994 NET developed the "*Closing the Performance Gap with School Breakfast*" video to continue efforts to promote breakfast. NET contract trainers presented the ESR IV curriculum developed by TEA to teachers and children in grades K-12.

Texas Department of Mental Health and Mental Retardation

In 1993 NET coordinated efforts with TXMHMR to provide a *Train the Trainer* workshop to TXMHMR and NET trainers and staff. The workshop lasted for two days and was developed and delivered by an independent consultant sponsored by NET. In 1994 NET co-sponsored a nutrition workshop presented at the annual TXMHMR seminar.

Texas Department of Agriculture

In 1991 NET awarded a grant to the TDA to develop materials that promote Texas agricultural products to children in grades K-3. The grant funded production of educational materials to support Project TEACH (Texas Education and Agriculture Cooperating for Health). This cooperation continued in 1992 as NET provided expertise in developing additional materials. In 1994 NET presented project TEACH to teachers and children in grades 1-3.

The University of Texas at Austin

In 1994, as in 1993, NET provided work experience for two dietetic interns from The University of Texas at Austin. The internship is in partial fulfillment of the requirements of the Coordinated Undergraduate Program of the Department of Human Ecology. The purpose of the internship is to familiarize the students with clinical, public health, nutrition, and nutrition education programs. Each intern spent one day a week for six

weeks in the NET program. They delivered presentations to elementary and secondary school students and participated in material development and evaluation.

The State Agency Libraries of Texas

The NET Librarian was an active participant in SALT during FFY 1994. She scheduled meetings and disseminated NET library brochures to agencies represented by SALT. Agencies were also invited to attend an open house at the NET Library.

Summary

Figure 12 summarizes the various target groups participating in the NET program as a result of NET's outreach efforts in FFY 1994.

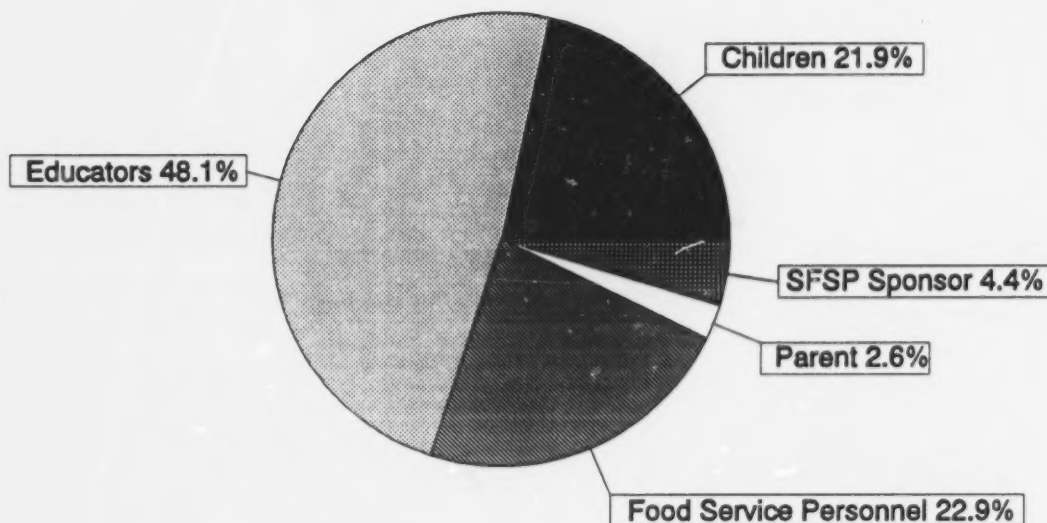


Figure 12. Target Groups Participating in NET Interventions

It may be noted that the number of children cited in Figure 12 represents children reached directly through classroom presentations. In 1994, 821,407 children were reached indirectly by adults participating in NET workshops and/or other education and training activities based on the NET library materials, compared to 813,623 children in 1993.

Recommendations

- NET workshops continued to vary considerably in the number of times conducted and the number of participants who attended them. Statewide scheduling seems to be the major factor in increasing workshop participation. It is recommended that NET strive to achieve a balance between State and local needs by increasing the number of workshops scheduled statewide.
- Since participation of public school teachers in NET workshops did not reach the anticipated goal for 1994, more efforts should be directed toward meeting the training

needs of public school teachers. NET completed a two-year comprehensive assessment of the nutrition education and training needs of public school populations. NET could disseminate the results of the needs assessment to TEA and other organizations involved in teacher training and work with these organizations to meet the needs of public and private school teachers. NET should also promote the workshops in teacher associations, meetings, and periodicals.

- Research indicates that single workshops could result in a change in knowledge, but changes in attitudes and practices are achieved by more extensive instruction. NET may organize its workshops in series around topics of interest to specific target populations. These series of workshops would allow for organizing the content in a spiral curriculum and allow more time to reinforce concepts, provide in-depth training, and evaluation. This organization would also allow more flexibility to meet the needs of participants at different levels of competence and with different time limits at hand.
- Since library items circulated to day care centers and family day homes were relatively few, more library outreach efforts should be directed to these facilities. Promoting nutrition and health to facilities that care for children at an early age is crucial to the realization of NET's goals. NET could develop movable exhibits of samples of suitable materials and combine these exhibits with short presentations delivered at day care centers and training sessions of day home sponsors.
- NET needs to maintain mailed and published information about the library collection as an important source of library outreach. Distributing library catalogs, bibliographies, and updates to schools and child care facilities and publishing articles and announcements in magazines and newsletters was an effective means of library outreach in the past and should continue and expand.
- Since few parents were reached through NET's direct interventions in FFY 1994 and in previous years, it is recommended that NET develop and deliver presentations and handouts for parents. NET should continue efforts to reach parents in PTA meetings and through their children in schools and child care facilities.
- Since NET participates in promotional campaigns such as Texas School Breakfast Week and Texas School Lunch Week, the NET library could prepare packages of audiovisual and print materials to support these campaigns as they are held, and to provide information to groups and individuals that are interested in learning more about the subjects of the campaigns.

- As the number of NET presentations and exhibits increases, NET needs to continue to develop standard presentations to enhance the quality of the presentation. These presentations should be on current topics of interest to NET target populations, as identified in the NET comprehensive needs assessment.
- To reach the few SFSP sponsors in Texas, NET may develop an individualized instruction unit on NET and on basic nutrition concepts that are beneficial to this target population. Simple evaluation instruments should be included in the unit to ensure sponsors' mastery of the unit's content. NET may coordinate the distribution of the unit with the annual training TDHS provides for the sponsors, and augment the unit with exhibits and brochures.
- NET should continue its enhanced efforts in publications to inform the public of NET program services and share with professionals experiences and ideas on nutrition education and evaluation. Regular announcements on NET activities and services may be negotiated with newsletters aimed at NET target populations.
- NET's diligent coordination with related publicly-supported programs resulted in measurable increases in participation and in contributions state and nationwide. This coordination should continue and should be extended to commodity and food distribution programs, and to related non-profit community organizations.

III. REPORT ON THE PROJECT: AN ASSESSMENT OF NUTRITION EDUCATION AND TRAINING NEEDS IN TEXAS

Introduction

Importance of the Project

Texas was one of the first states in the nation to implement the NET program in 1978. With a population of approximately 17.7 million, it is imperative to provide nutrition information and instructional resources for over 4.8 million children and for key individuals involved in their learning environment, including parents or guardians, caregivers, educators, and food service personnel.

Nutrition education enhances efforts to provide nutritious and healthy food for Texas children. In 1990 Texas spent approximately \$13 billion of its total revenue on public school education, of which over one-sixth (\$702,835,220) went into feeding school children. About 40% (1,221,956) of these children applied for and were eligible to receive free or reduced-price meals based on their family income. Similar efforts and resources are directed to feeding children at their homes and in child care facilities. The goal of the NET program is to increase the likelihood that these efforts and resources result in improving the nutritional status of Texas children.

Ethnicity is another factor affecting child nutrition in Texas. In 1989 TEA surveyed ethnicity in Texas public schools. The results showed that 50.2% of the children were White, 33.1% were Hispanic, 14.7% were African American, and the rest were Asian and American Indian. The percent of Hispanics in individual schools ranged from 0% to 100%, and the percent of African Americans ranged from 0% to 68.2%. This cultural diversity makes the task of providing nutritious food appealing to different ethnic groups quite difficult, and requires that nutrition education and training be tailored to different ethnic dietary habits.

To tailor NET program activities to the needs of the above mentioned populations, NET develops and implements yearly evaluation plans. The results of the evaluations are used to improve the ongoing activities of the program and to adjust the program's objectives for the following years. The regulations governing NET specify needs assessment as a systematic process for delineating the scope, outreach, and success of the program's activities.

Previous Needs Assessments

In 1979 NET assessed the nutrition education and training needs of Child Care Food Program providers in day homes. NET conducted another needs assessment during 1985 to determine the nutrition education resources and interests of public school teachers and food service personnel. A study was conducted in 1986 to determine the resources available to 29 state agencies interested in nutrition education and training and to assess their need for improved coordination. In 1988 NET assessed the needs of food and nutrition program personnel within TDHS so that appropriate materials would be made available to them in the NET library collection. A statewide comprehensive assessment of the nutrition education and training needs of the program's target populations, however, was not conducted.

Project Benefits

There are several federal, state, and community agencies that are concerned with nutrition education and training in Texas. For example, the food assistance and food distribution programs administered by TDHS, the nutrition programs administered by Women, Infants and Children (WIC) at the Department of Health, and the CNP administered by TEA. The missions of these agencies are interrelated and coordination among them would help avoid duplication of effort and allow sharing of resources. Due to insufficient funds, these agencies are also without information on the nutrition education and training needs in Texas.

The results of the needs assessment is expected to benefit NET and all agencies concerned with nutrition and with nutrition education and training in Texas. These agencies are expected to use the needs assessment to define their objectives, develop long-range strategic plans, set priorities, coordinate efforts on the bases of well-determined needs, direct limited resources to the State's most pressing needs, and measure the success of their efforts relative to their effectiveness in meeting these needs.

Specifically, the needs assessment will identify nutritious foods that appeal to the different cultural groups in Texas, and ways of promoting these foods among the different target populations. This, in turn, would result in more successful efforts toward decreasing children's plate-waste and increasing their intake of nutritious foods.

In a state the size of Texas, minimal positive effects on the food and nutrition programs would result in noticeable savings. For example, if as a result of the needs assessment,

the plate-waste of each public school child who receives free or reduced-price meals is decreased \$1 year-round, more than \$1,221,956 will be saved each year. Similar savings will be possible in the food and nutrition programs directed to children in non-public schools.

Other indirect benefits would materialize as a result of the needs assessment. For example, improving the nutritional status of Texas children would improve their health and result in savings in the child health care programs. The scholastic achievement of these children would improve. Based on the assessment, a sizable part of the needs assessment and the nutrition education and training efforts would be directed to adults who influence the children's learning environment. Therefore, the nutritional status of those adults would improve.

Objectives

The comprehensive needs assessment was expected to accomplish the following objectives:

- Identify the nutrition education and training needs of the various target populations and the interdependencies between these needs.
- Detect the variances and similarities of the education and training needs that are resulting from differences in socioeconomic status and ethnicity.
- Prioritized the nutrition education and training needs based on selected, well-defined criteria.
- Provide federal, state, and community agencies with data necessary to develop long-range nutrition education and training plans.
- Provide information that would enable federal, state, and community agencies to coordinate their efforts and share resources.
- Set criteria to be used by the food and nutrition programs in Texas to assess their relative success or failure in meeting the food and nutrition needs of the State.
- Inform individuals and groups in Texas on the effect of food intake on children's health, physical fitness, and scholastic achievement.

- Provide information that may guide the appropriation of monies to food and nutrition programs and to nutrition education and training programs.

Problem Statement

The project was expected to answer the following questions:

- What are the major nutrition-related health problems in Texas among children in general and among the at-risk groups? What are the nutrition education and training needs related to these problems?
- Are there problems in the dietary habits of children of diverse cultural backgrounds? What type of nutrition education and training is needed to make positive changes in these habits?
- What are the competencies and interests of educators and caregivers in the area of nutrition education? What is the nutrition education and training needed to help develop these competencies and interests?
- Do educators and caregivers encounter problems in conducting effective nutrition education activities? If so, what in-service training and/or materials can assist in alleviating these problems?
- What are the competencies and interests of food service personnel in the areas of food service management and nutrition education? What is the nutrition education and training needed to help develop these competencies and interests?
- Do food service personnel encounter problems in procuring and/or preparing nutritious and appealing food economically? If so, what in-service training and/or materials can assist in alleviating these problems?
- Do administrators of schools and child care facilities recognize the importance of nutrition education and training? Do they encounter problems in coordinating the nutrition education efforts of educators with the meal preparation and activities of the food service personnel? If so, what is the nutrition education and training needed to help alleviate these problems?

Research Methods

NET developed a RFP packet and outlined the research methods to be followed by a successful offeror. The offeror was to conduct the needs assessment in two stages. During the first stage, the nutrition education and training needs related to K-12 school children were to be assessed. During the second stage, the nutrition education and training needs of children at home and in child care facilities was to be determined. It was estimated that the first stage of the needs assessment would last 2 years and the second stage would last 1 year.

Stage I: K-12 School Children

NET specified the following four phases for the first two years of the project.

First Phase: Setting Goals and Criteria (Duration, 5 months). Nutrition education and training goals and goal indicators were to be set with respect to each target population. This would furnish a point of reference or preliminary criteria for the nutrition education and training in the State. Goal statements were to be collected from the literature on goals, standards, and evaluations of nutrition education and training. Indicator(s) were to be specified for each goal. The goals and their indicators were to be submitted to ICON for review and were to be modified or expanded accordingly. The offeror would classify the resulting goals and goal indicators under the goal areas set for the NET program, or under other goal areas if needed. These goals and goal indicators were to serve as criteria for nutrition education and training in Texas.

Second Phase: Collecting Available Data and Developing Data Collection Procedures and Instruments (Duration, 7 months). The successful offeror was to use the goals and goal indicators developed in the first phase of the needs assessment to identify the main areas of information to be collected. Available data on the state of nutrition education and training of the target populations and their relationship to children's scholastic achievement, health, and physical fitness were to be collected. Procedures and instruments were to be developed to collect unavailable data. The following steps were identified to collect unavailable data:

- **Sample Selection.** A representative sample of public and private schools throughout Texas was to be drawn at random from the 20 education regions in Texas. The number of schools selected from each region were to be proportional to the number of schools in that

region and were to include schools participating in the different USDA food programs. Culturally representative samples were to be drawn from children enrolled in these schools and from their parents or guardians. The teachers responsible for the children's nutrition education, food service personnel, and principals were to be included in the sample.

- **Instrument Design.** Assessment instruments were to be designed such as: (a) questionnaires for children, parents or guardians, teachers, school principals, and food service personnel to measure the nutritional knowledge and attitudes of the sample; (b) instruments for menu analysis, food-intake recalls, and plate-waste records to measure the type and amount of food served, consumed, and/or discarded by children; (c) instruments to collect health information (e.g., dental, height, weight, hematocrit values, hemoglobin, and urinalysis) from the children's health records that are kept by school nurses and/or children's physicians if available, or through clinical examinations of a random sample of the children; (d) instruments to collect data on the children's physical fitness. Readability, reliability, and validity of these instruments were to be assessed. The mean percentile ranks of children on the national achievement tests conducted in the schools were to be collected. Previously developed and readily available instruments were to be used whenever possible after being modified to meet the needs assessment objectives and the sample characteristics.
- **Procedures Development.** Procedures on how and when to apply each assessment instrument and on conducting school visits were to be developed and piloted and the time spent on following each procedure estimated. The research team responsible for data collection was to be trained on these procedures. The necessary approvals to collect data were to be secured.

Third Phase: Collecting Information on the State of Nutrition Education and Training (Duration, 7 months). The successful offeror was to implement the procedures developed in the second phase of the needs assessment and to collect data using the developed instruments. Collected data was to be analyzed to determine the actual condition of nutrition education and training with respect to the different cultural groups in the population. Following are the steps specified for data analysis and classification.

- **Data Analysis.** The main effects of the variables assessed (i.e., nutritional knowledge, attitudes, and practices; school menus; menu-recalls; plate-waste; health and physical fitness; and scholastic achievement) were to be analyzed separately and the interactions and correlations between these variables estimated. These analyses were to be conducted with respect to the samples of children, parents or guardians, teachers, food service personnel, and principals; and with respect to socioeconomic status, ethnicity, and grade level subgroups within these samples.
- **Information Classification.** The resulting information was to be cataloged and indexed based on its pertinence to the goals and goal indicators established in the first phase of the needs assessment. This was to determine the needs related to each of the nutrition education and training goals.

The offeror was asked to submit the information to ICON for review and to collect additional information, as needed, based on the advice of the Council.

Fourth Phase: Identifying and Prioritizing Needs (Duration, 5 months). The information on the state of nutrition education and training collected in the third phase of the needs assessment was to be compared with the criteria developed in the first phase. Discrepancies between the actual and ideal state of nutrition education and training were to identify the nutrition education and training needs. The needs were to be compared and ranked in priority order, based on selected criteria such as the magnitude of the need and its effect on children's health. The list of prioritized needs were to be submitted to ICON for review.

Stage II: K-12 School Children

NET assigned 1 year for a second stage of the project. During the second stage, the nutrition education and training needs of children in homes and child care facilities were to be determined in two phases. During the first phase, information on the state of nutrition education and training related to these children was to be collected. During the second phase, the nutrition education and training needs related to the children were to be identified and prioritized. There would be no need to set goals and criteria in this stage, for the goals would have been set during the first phase of the first stage. The offeror was expected to follow procedures similar to those followed during the first stage of the project to assess the current state of nutrition education and training and to define the nutrition education and training needs.

Awarding the Project's Contract

A contract between TTU and TDHS was signed and became effective September 27, 1992, for a period of 12 months. The contract was renewable for two more years, subject to the availability of funds. Details of the project requirements that are included in the contract between TTU and TDHS and the process of selecting the contractor are stated in the Final Evaluation Report of Texas Nutrition Education and Training Program for Federal Fiscal Year 1993.

Project Accomplishments in 1993 and 1994

All project requirements were met during the first two years of the contract. Goals and goal indicators were developed and validated by a two-phase Delphi process. The Panel members who evaluated the goals and goal indicators were the ICON members. The goals and goal indicators were considered criteria for nutrition education and training in Texas. Assessment instruments were developed based on the goals and their indicators to measure the nutrition knowledge, attitudes and practices of school populations. The instruments and procedures were field tested and revised.

For the random sampling of Students, all Texas schools were classified into three categories according to ethnicity, family income, and scholastic achievement. Twelve subpopulations representing these three variables formed the sampling frame for the populations of elementary, junior high, and high school children.

Public (443) and non-public (41) schools throughout the 20 educational regions of Texas were randomly drawn and the administrators were invited to participate in the study. The response rate was 46%. Only 22% of the schools gave permission for on-site data collection. 8% gave permission for mail questionnaires and 16% declined to participate. This resulted in a total of 84 school on-site visits and 202 school mail questionnaires. The sample included, 1,793 3rd graders; 1,937 5th graders; 813 8th grader; and 667 11th graders; 2,730 parents; 218 teachers; 151 food service managers; 145 food service workers; and 139 administrators. The total number of participants was 8,593.

Research teams were selected and trained on project procedures. They collected data on-site at the 84 randomly selected schools. Data included completed questionnaires, physical fitness and health assessments, scholastic achievement scores, plate waste and food service practice observation. For the mail questionnaire, packets of instruments and directions were mailed to school administrators who disseminated the materials, collected completed instruments, and returned them to the NET research office.

Data were collected, coded, entered into the mainframe computer, and standardized residuals were computed. The standard of 70% was established for the measurements of acceptable performance on the various measurements. ANOVA and multiple comparisons were used to test the data for significant differences according to ethnicity. The same analysis was used to identify significant differences according to family income.

Results indicated that nutrition knowledge was, in general, below 70% acceptable level for all populations. Nutrition attitudes were positive. Food choices and nutrition practices need to be improved in order to meet the Dietary Guidelines for Americans. In addition, food service managers need support in planning and implementing menus which are more in compliance with the guidelines. The populations are eating too much fat, saturated fat, cholesterol, sugar and sodium.

Significant differences were found for ethnicity according to total nutrition knowledge assessment. White children had higher nutrition knowledge scores than African-American and Hispanic children.

Significant differences were found on the total nutrition attitude assessment for 8th and 11th grades. In the 8th grade, Whites had more positive attitudes toward nutrition than Hispanics, and African-Americans held more positive attitudes than Hispanics. For the 11th grade, Hispanics had more positive attitudes toward nutrition than Whites.

Significant differences were found on food choices in grades 3, 5 and 8 with Whites selecting more nutritious food than African-Americans, and Hispanics. Hispanics selected more nutritious food than African-Americans.

Significant differences were found on the nutrition practices in grade 5 and 8 with Whites following the Dietary Guidelines more than Hispanics and African-Americans.

Thus, educational strategies need to be developed to meet the less desirable nutrition knowledge, attitudes, food choices, and nutrition practices of school age children. Although Whites frequently performed significantly better than other ethnic groups, their mean scores were below the 70% acceptability level.

Significant differences were found across family income status. Students with paid meals (according to eligibility for paid, reduced, or free meals) had higher knowledge achievement than those with free meals, and reduced price meals. No significant differences were found across family income on attitude assessment for all grades.

Similar results were evident when the effect of children's scholastic achievement on their nutrition knowledge attitudes and practices were investigated. Students with high scholastic achievement scores scored better in nutrition knowledge and practice.

On the assessment of physical fitness, the major finding was that 25% of the children of all ages were obese. This is a serious concern because these children will experience major health problems in the future unless dietary habits are modified and regular exercise is incorporated within the daily routine. Only 9% of the children were anemic.

Participation in the school meal programs was assessed. If students ate breakfast at all, they ate this meal at home. The majority of students ate school lunch five days per week, with the exception of the 11th graders. The main reason given for not participating in the school meal program was not liking the food. In general, the parents were satisfied with the meals although the main reason for dissatisfaction was that the food was not appealing. Another complaint was that too much sugar and starch were served.

The nutrition knowledge, food choices, and nutrition practices (with and without the presence of children) of parents and teachers were below the acceptability level of 70%. To address these findings, recommendations were made to provide nutrition intervention to increase the awareness and importance of the Dietary Guidelines for Americans.

Food service personnel lack nutrition knowledge, especially in the topics of sanitation and safety and healthy food choices. Food service managers need to upgrade their management knowledge, especially in menu planning, marketing, sanitation and safety, food acceptance, service, and financial management. Training and resources are necessary to promote compliance of planned and served menus with the Dietary Guidelines for Americans and the National Research Council.

Administrators' knowledge of the relationship between nutrition and scholastic achievement was below 70%. Almost all of the administrators stated that nutrition is taught in their school with almost 90% of the schools having nutrition integrated into health, science, and physical education.

Differences were apparent on teaching nutrition and the process of cooperation and support. Over three-fourths of teachers, food service, and administrators indicated that there is a shortage in nutrition education in the cafeteria. Collaboration and support on the nutrition education among teachers, administrators, and food service is needed. It may prove beneficial to expand the efforts to include a registered dietitian, parents, and children on a task force. Food service managers and administrators were much more supportive of nutrition education activities than teachers. Recognition of specific ways to promote nutrition education in the cafeteria were quite similar across the three groups.

Teachers, food service personnel and administrators identified resources and problems related to school food service and nutrition education and training. Nutrition and nutrition education topics of interest to the target populations were assessed, as well as preferred methods of receiving information on these topics.

Details of the project's accomplishments in FFY 1993 and FFY 1994 are included in two separate yearly reports titled, "An Assessment of the Nutrition Education and Training Needs in Texas." Copies of the project reports are available from the Texas NET Program.

The contract with TTU was renewed for another 12-month period to collect data on the actual state of nutrition education among preschool populations, compare it with the desired state as specified in the established criteria, and to identify the nutrition education and training needs.

Recommendations

- NET should incorporate the results of the project in its current and future plans and activities; and coordinate efforts with other agencies interested in food and nutrition and nutrition education and training based on the results of the needs assessment.
- NET should disseminate the results of the first stage of the needs assessment to ICON members and to other state and community agencies and groups in Texas that are interested in food and nutrition and nutrition education and training.
- States may be awarded periodic grants to specifically conduct comprehensive needs assessments. Apart from funding relatively large research projects, these grants would allow more time for advanced planning and development of a RFP, more time for awarding a contract to conduct the project, and continuation of regular NET services.
- Texas NET should share the yearly accomplishments of the project and experiences gained with the rest of the states to avoid possible duplication of efforts and enhance efforts toward better methodologies and outcomes.
- Texas NET should review its past, present, and future needs assessment efforts with the Nutrition and Technical Services Division of the USDA Food and Nutrition Service to ensure that these efforts are within the national framework developed for NET needs assessments.

IV. GENERAL EVALUATION OF THE NET PROGRAM

Introduction

Background

Formal evaluation of the Texas NET program was initiated in October 1984 to meet federal requirements for program evaluation and to collect information that helps make the program as effective as possible. Since then, a number of studies have been conducted each year to develop information the General Accounting Office cited in 1982 as being necessary to:

- Effectively administer the program
- Guide program revisions and planning
- Ensure that federal funds are spent effectively
- Supply the USDA with data to submit to Congress to aid decisions about how to apportion scarce resources

During FFY 1994 NET directed the comprehensive statewide needs assessment project mentioned in the third section of this report. Two evaluation studies were conducted to answer the following questions about performance of the Texas NET Program:

1. To what extent did the NET Program achieve its participation goals during FFY 1994?
2. How effective was the Texas NET Program in achieving its goals, relative to its resources?

The first question was answered in the second section of this report. The second question is answered in this section.

Purpose

The purpose of this study was to assess overall program performance during FFY 1994. The results of the evaluations conducted during the year were combined to produce an index of program effectiveness. Key questions answered in this section are:

- Relative to its resources, was the overall effect of the Texas NET program in 1994 positive, negative, or nonsignificant?
- What were the strengths and weaknesses of overall program performance during FFY 1994?

Program Resources

Budget and Staffing

Two main resources of the Texas NET program are its budget, which provides the material resource, and its staff, which provides the human resource. Table 12 summarizes and compares the program's resources for the past ten years.

Table 12

Texas NET Program Resources for the Past Nine Years

Resources	FFY85	FFY86	FFY87	FFY88	FFY89	FFY90	FFY91	FFY92	FFY93	FFY 94
BUDGET	294,060	294,060	295,860	315,290	315,000	318,642	513,518	703,396	718,190	744,215
STAFFING										
Coordinator	1.000	.300	.125	.750	1.000	1.000	1.000	1.000	1.000	1.000
Evaluator	1.000	1.000	1.000	0.850	1.000	1.000	1.000	1.000	1.000	1.000
Program Specialists	2.000	1.500	2.000	2.000	2.000	1.500	2.000	2.000	2.000	2.000
Librarian	-----	-----	-----	-----	-----	0.500	1.000	1.000	1.000	1.000
Assistant	-----	-----	-----	-----	-----	-----	2.000	3.000	2.000	2.000
Information Specialist	-----	-----	-----	-----	-----	-----	-----	-----	1.000	1.000
Clerical & Automation Support	3.000	2.670	3.000	3.000	2.500	3.000	1.000	1.000	1.000	1.000
Total Staff	7.000	5.470	6.125	6.600	6.500	7.000	8.000	9.000	9.000	9.000

Table 12 shows that NET program funding increased 3.6% over 1993 compared to a 2.1% increase in the previous year. The USDA funding formula for the NET program is based on the number of school children in the State. In Texas, the number of children attending public schools grew from 3,460,378 in 1992/93 to 3,535,742 in 1993/94. Staffing remained the same in 1994 but contract funding increased.

It must be noted here that over 22.2% of the budget (\$165,000) was invested in research. Compared to 24.8% in 1993. TTU was awarded this money to fund the second phase of the comprehensive nutrition education and training needs assessment. The effect of this research endeavor on the NET program is expected to materialize in future developments and improvements. The results would also benefit federal, state and community agencies concerned with nutrition and education.

Contracts

A total of 28 contracts were awarded or renewed in 1994. The amount of each and activities conducted using all or part of the amount are as follows.

Texas School for the Deaf Contract

The Texas School for the Deaf, located in Austin, was awarded \$4,000 from the 1994 budget to package and mail materials distributed to NET program participants, and especially the workshop curriculum packages mailed to the different training sites.

Workshop Trainers Contracts

NET contracted with 25 registered and/or licensed dietitians from different regions throughout Texas to deliver NET workshops and participate in workshop development and library material evaluation. The trainers also delivered presentations and were encouraged to hold exhibits in their regions. They were brought once to Austin--the NET program office location--to participate in the *Train the Trainer* workshop. The workshop was designed to familiarize them with the NET program and its services, the workshops, procedures to schedule and conduct a workshop, and the facilities and resources available to them, especially the NET library. The trainers were also instructed on the principles of conducting successful workshops. The 25 contracts awarded to the trainers totaled \$100,000.00. This amount was funded from the FFY 1994 budget.

Independent Translator Contract

NET awarded a \$10,000 ongoing contract to an independent translator in Austin to translate educational/promotional materials into Spanish. The contract was funded from the 1993 budget. The contractor translated the *NET Presentation Evaluation Form*, *Food Service Guide*, and the script of the *Nutrition and the Preschool Child* video in 1994.

Texas Tech University Contract

As mentioned in the third section of this report, NET developed a RFP to conduct a three-year comprehensive nutrition education and training needs assessment statewide. An interagency contract was awarded to TTU at the end of 1992. In 1993 a research team from TTU worked with the NET Program Evaluator to implement the RFP requirements and provisions of the first year. The amount of the original contract was \$99,998 which was funded out of the 1992 NET budget. The contract was renewed for a second year for \$158,000 to complete the assessment of the needs of Texas school populations, including children, parents, educators, food service personnel and administrators.

In September 1994 the contract was renewed for a third year to assess the needs of preschool populations. TTU was awarded \$165,000 out of the 1994 budget.

Program Activities

Table 13 summarizes the main activities of the program since 1985.

Table 13

Texas NET Program Activities for the Past Nine Years

Activities	FFY85	FFY86	FFY87	FFY88	FFY89	FFY90	FFY91	FFY92	FFY93	FFY94
WORKSHOPS										
Developed	2	2	3	1	2	2	---	2	2	2
Conducted	165	145	185	183	112	103	164	225	193	192
LIBRARY										
Acquisitions			180	420	68	304	606	238	321	479
Items Circulated/Month	70	100	100	150	189	231	274	319	427	482
Catalogs Distributed	10,000	12,000	680	200	632	490	2,489	383	655	1,934
MATERIALS										
Acquisitions/ Development	5	5	15		5	5	10	10	17	15
Distributions	9,700	10,800	12,800	17,200	11,800	11,776	24,645	32,021	800,426	10,892
SPECIAL PROJECTS										
Mini-contracts/ Development Contracts	3	3	2	0	1	2	4	11	8	6
Evaluation/Needs Assessment Studies	6	7	6	5	5	5	6	5	3	3
Persons Reached	6,200	9,700	10,900	10,300	23,343	25,760	622,576	955,863	847,195	861,882

Table 13 shows that expansion in program resources resulted in similar expansion in program activities in most areas. The number of workshops conducted (192) fell 14.7% from the 1992 maximum of 225.

Acquisition and circulation of library materials increased considerably since 1985, perhaps due to the relative stability and growth of resources allocated to the library. In 1994 library acquisitions increased 49.2% over 1993. Monthly circulation of library items was 12.9% more than in 1993. The number of catalogs distributed in 1994 increase¹ considerably. Catalog distribution was expected to increase in 1994 as a result of developing the audiovisual catalog in 1993 and distributing it to organizations interested in nutrition education. A similar increase is expected in 1995 as a result of revising the print catalog in 1994.

Material acquisition fluctuated slightly during the past ten years. 1993 witnessed a considerable surge in material distribution due to outreach letters distributed to school superintendents, food service personnel, PTA presidents, day care centers, and day home sponsors, and distribution of 751,500 lunch bags promoting breakfast to school children. The decrease in 1994 material distribution compared to the 7 previous years is due to a change in the workshop policy. NET stopped distributing workshop materials and handouts to the facilities of workshop participants. In 1994 participation in the NET program increased slightly (1.7%) from participation in 1993 after its steady increase in the two previous years.

Considering the program's activities relative to its resources, and the program's potential for improved planning of activities based on the results of evaluation and needs assessment one must conclude that the program is administered efficiently and that it is realizing its goals.

Meta-Analysis of Program Outcomes

Results of evaluations of specific NET activities were integrated to develop an index and analysis of overall effectiveness of program performance in 1994. The vote-counting method for program meta-analysis was applied to integrate results of evaluations conducted during FFY 1994. These evaluations included varied data collection and analysis procedures that were described in detail in the previous sections of this report. Following is a summary of these procedures:

- To estimate the effectiveness of the program in achieving its participation goals for FFY 1994, goals were set for each of the program's major

activities and for each of its target populations. Participation goals were estimated based on current priorities, current staffing, and prior participation figures.

- To estimate program expansion and efficiency in 1994 participation in program intervention was compared with participation in similar interventions in 1993.
- Ratings of participants to program interventions were used as an estimate of the quality of these interventions.
- To estimate the effectiveness of the contracts/grants awarded for research and development, effectiveness was measured by the extent of fulfilling the terms stipulated in the contract.

Results and Discussion

To apply the vote-counting method for integrating results across these separate evaluations, counts were made of all findings that were classified as positive, negative, or nonsignificant. Tallies were compared and the modal category accepted as giving the best estimate of NET Program effectiveness. Table 14 summarizes results of the meta-analysis.

Table 14

Results of Meta-Analysis of Program Outcomes

Activity	Data Analysis	Indicator	Result
Workshops	Percentage increase over 1993	Number of workshops	Same
	Percentage increase over 1993	Number of workshop participants	Positive
	Goal-percentage by target population	Number of workshop participants from public schools	Negative
	Goal-percentage by target population	Number of workshop participants from other populations	Positive
Leading Library	Percentage increase over 1993	Total circulation	Positive
	Goal-percentage by target population	Number of public school populations borrowing from the library	Positive
	Goal-percentage by target population	Number of child care populations borrowing from the library	Positive
	Rating scale on borrowers feedback forms	Substance of borrowed materials	Positive
	Rating scale on borrowers feedback form	Usefulness of borrowed materials	Positive
	Rating scale on borrowers feedback form	Quality of borrowed materials	Positive
Development and Distribution of Instructional Materials	Percentage increase over 1993	Number of materials developed	Negative
	Percentage increase over 1993	Number of materials distributed	Negative
Presentations, Exhibits, and Publications	Goal-percentage	Number of presentations and exhibits	Positive
	Percentage increase over 1993	Number of publications	
Coordination With Related Programs	Percentage increase over 1993	Number of organizations	Positive
	Percentage increase over 1993		Same

Table 14 indicates that when data were integrated across the evaluations conducted during FFY 1994, it revealed an overall positive impact of the NET program in Texas. Seventeen evaluations were conducted to estimate the effectiveness of the main aspects of the program. Twelve of these evaluations showed positive outcomes, and three outcomes

were negative and two remained the same. Negative results in general indicate a need to improve the ability of the program to monitor activities and take timely measures to correct services and procedures.

The number of participants in some of the workshops conducted in 1994 was less than the number required to conduct these workshops according to workshop procedures. This indicates a need for a closer look at the procedures followed in scheduling workshops, and on the appeal of some of the workshops to the target populations. Failure of the workshops to attract public school educators points to a need to coordinate teacher training with TEA and to implement the results of the comprehensive needs assessment regarding teacher training needs.

All the NET library participation goals were met in 1994. The lending library attracted more patrons and circulated more nutrition and food service management materials during 1994 than in any previous year.

NET developed and distributed less instructional/promotional materials in 1994 than in 1993 and previous years as it stopped the distribution of workshop materials to the facilities of workshop participants. The NET staff and contractors were active in giving presentations nationally and statewide and in publicizing NET services and evaluations.

In 1994 the NET program also remained actively involved in coordination efforts with other public sector programs and agencies engaged in child nutrition activities. This coordination is an extension of a trend that started in 1990 and is expected to continue due to the long range strategic planning between NET and other agencies. Effects of such efforts are expected to materialize in the form of substantial increases in NET outreach and participation in subsequent years.

Recommendations

- Few NET activities are directed toward promoting use of the cafeteria as a learning laboratory. NET may develop presentations and materials for use in the cafeterias and for reinforcing, in the classroom, knowledge and attitudes gained from these activities.
- Since NET is expanding its efforts commensurate to budget increases, it is recommended that nutrition education and training services target parents of small children, due to the important role they play in their children's knowledge, attitudes, and behaviors.

- Related to the previous recommendation, NET should continue the function of a clearinghouse and a consultant to organizations, facilities, groups, and individuals on nutrition education and training in general, and on best practices in the field.
- NET may recruit the contract trainers in consulting workshop participants as they apply the knowledge and skills gained from the workshops in their work environments. Similar services could also be provided to schools, child care centers, day homes, and parents in general. The trainers could provide menu analysis and dietetic consultations to soup kitchens, half-way homes, and to other organizations serving at-risk groups such as the indigent and the homeless.
- The mini-contracts to school districts were successful in previous years in providing educational activities and instructional materials tailored to school populations. NET should continue this type of activity and share the outcomes of these mini-contracts with the rest of Texas school districts.
- Since NET is expanding its interventions and strategies, there is an emerging need for measuring the relative cost-effectiveness of various interventions and alternative strategies. Emphasis should be placed on more successful and cost-effective interventions and strategies.
- There is a need to direct more efforts toward measuring the quality of NET's services and follow-up with necessary improvements.

APPENDIX

EVALUATION INSTRUMENTS USED IN NET PROGRAM OUTREACH

NET PROGRAM WORKSHOP EVALUATION

Workshop: _____ Instructor: _____ Date: _____

Directions: Please circle the number that best describes your evaluation. Use the following number values:

1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree

The Workshop:

- | | | | | | |
|---|---|---|---|---|---|
| 1. Main points/objectives were clear | 1 | 2 | 3 | 4 | 5 |
| 2. Was well-organized | 1 | 2 | 3 | 4 | 5 |
| 3. Was well-paced/kept my interest | 1 | 2 | 3 | 4 | 5 |
| 4. Contained the right amount of information | 1 | 2 | 3 | 4 | 5 |
| 5. Gave me enough opportunity to practice the new skills | 1 | 2 | 3 | 4 | 5 |
| 6. Gave enough feedback on how well I used the new skills | 1 | 2 | 3 | 4 | 5 |

The Materials:

- | | | | | | |
|---|---|---|---|---|---|
| 1. Were well-organized/easy to use | 1 | 2 | 3 | 4 | 5 |
| 2. Directly related to the subject being taught | 1 | 2 | 3 | 4 | 5 |
| 3. Were sequenced logically to help me understand | 1 | 2 | 3 | 4 | 5 |
| 4. Represented real-life, believable situations | 1 | 2 | 3 | 4 | 5 |
| 5. Used the right level of vocabulary | 1 | 2 | 3 | 4 | 5 |
| 6. Were visually appealing | 1 | 2 | 3 | 4 | 5 |

The Instructor:

- | | | | | | |
|--|---|---|---|---|---|
| 1. Was knowledgeable about the subject | 1 | 2 | 3 | 4 | 5 |
| 2. Was well-prepared for class | 1 | 2 | 3 | 4 | 5 |
| 3. Encouraged class participation and discussions. | 1 | 2 | 3 | 4 | 5 |
| 4. Answered questions effectively/non-judgmentally | 1 | 2 | 3 | 4 | 5 |
| 5. Illustrated the course with useful examples | 1 | 2 | 3 | 4 | 5 |
| 6. Used class equipment competently. | 1 | 2 | 3 | 4 | 5 |

What part(s) of the session will be **most** helpful to you in doing your job?

What part(s) of the session will be **least** helpful to you in doing your job?

What suggestions do you have for improving this session?

Thank You.

30

Revised January 1992

NET Evaluation of Workshop Instructor

GENERAL INFORMATION

Name of Workshop: _____ Date: _____
 Name of Instructor: _____
 Name of Evaluator: _____
 Workshop Location: _____
 Name of Facility City

Please circle the number which corresponds to your rating of the instructor's performance during the workshop.

	Excellent (5)	Good (4)	Average (3)	Fair (2)	Poor (1)
<u>OBJECTIVES</u>					
1. Clearly stated the objectives at the beginning of the session	5	4	3	2	1
2. Demonstrated the importance and significance of the objectives	5	4	3	2	1
<u>CONTENT</u>					
3. Presented a brief overview of the teaching points showing how they relate to the objectives	5	4	3	2	1
4. Explicitly stated the relationships among the teaching points	5	4	3	2	1
5. Periodically summarized the main ideas and concepts	5	4	3	2	1
6. Presented content that covered the stated objectives	5	4	3	2	1
<u>METHODS</u>					
7. Explained the ideas and concepts clearly and to the point	5	4	3	2	1
8. Invited participants to share their ideas and knowledge	5	4	3	2	1
9. Encouraged participants to ask questions and gave them meaningful answers	5	4	3	2	1
10. Provided cues or rephrased the questions to help participants answer their own questions whenever possible	5	4	3	2	1

Updated September 92

	Excellent (5)	Good (4)	Average (3)	Fair (2)	Poor (1)
11. Stated at least one problem to be solved or discussed during the workshop	5	4	3	2	1
12. Related materials to real life situations and to the participants' backgrounds	5	4	3	2	1
13. Changed approaches to meet new situations	5	4	3	2	1

AUDIOVISUALS

14. Presented examples, illustrations or graphics to clarify the content	5	4	3	2	1
15. used the board efficiently and legibly	5	4	3	2	1

EVALUATION

16. Asked questions periodically to determine whether too much or too little information was being presented	5	4	3	2	1
17. Varied content and methods according to the participants' levels	5	4	3	2	1
18. Gave adequate instructions on how to complete the evaluation instruments	5	4	3	2	1

WORKSHOP MANAGEMENT

19. Followed the curriculum as planned and did not digress from the main topic	5	4	3	2	1
20. Was well organized and appeared to be in control	5	4	3	2	1
21. Managed the time so as to cover all planned activities	5	4	3	2	1
22. Solved or otherwise dealt with problems raised by participants	5	4	3	2	1

OVERALL

23. Was friendly towards workshop participants	5	4	3	2	1
24. Seemed enthusiastic about the subject matter	5	4	3	2	1
25. Noted and responded to signs of puzzlement boredom, curiosity, etc.	5	4	3	2	1

Total

Was the anti-discrimination poster "And Justice for All" prominently displayed?

92 Yes No

GENERAL COMMENTS

If you were giving this workshop:

- a. What would you add? _____

- b. What would you leave out? _____

- c. What would you do differently? _____

If you have other suggestions or observations, please specify: _____

REPORTING

Returns the workshop report files within <u>two weeks</u> of workshop delivery	All the Time	Most of the Time	Sometimes	Rarely
Returns the training reports within <u>two weeks</u> of training	All the Time	Most of the Time	Sometimes	Rarely
Returns the presentation reports within <u>two weeks</u> of presentation	All the Time	Most of the Time	Sometimes	Rarely
Returns the library evaluation forms within <u>30 days</u> of receiving the materials	All the Time	Most of the Time	Sometimes	Rarely

Comments _____

WORKSHOP REGISTRATION FORM

General Information (please print)

Name of Workshop: _____ Date: _____

Your Name: _____

Sex: Male _____ Female _____

Ethnic Origin: White _____ Black _____ Hispanic _____ Asian/Pacific Islander _____
American Indian/Alaskan Native _____

Your Social Security Number: _____

Name of Your Work

Facility: _____

Work Address: _____

Street or P.O. Box

City

State

Zip Code

Work Telephone Number: _____

Area Code

Please circle the number next to the answer you choose.

1. For what type of facility do you work?

- | | | | |
|---|----------------------|---|------------------------------|
| 1 | Public school | 4 | Family day home |
| 2 | Private grade school | 5 | RCCI |
| 3 | Day care center | 6 | Other. Please specify: _____ |

2. What is your function?

- 1 Educator (a teacher, administrator, health educator, teacher aide, nurse, and other personnel who work in instructional capacity)
- 2 Food service personnel (a person who is employed on a full or part-time basis in the supervision, preparation, planning, or service of meals for children)
- 3 Parent or guardian (natural or legal parent, foster parent and/or other adult with full responsibility for a child's care)
- 4 Other. Please specify: _____

3. Are you a Summer Food Service Program Sponsor?

- 1 Yes
- 2 No

4. Approximately how many children do you teach, care for, supervise, or prepare meals for when performing the above mentioned function? _____ children

5. In what food program(s) does your facility participate?

- 1 Child Care Food Program
- 2 National School Lunch Program
- 3 School Breakfast Program
- 4 Special Milk Program
- 5 Summer Food Service Program
- 6 None.

THANK YOU!

94

Revised - January 1993

**NET PROGRAM
PRESENTATION EVALUATION**

Name of Your Work Facility: _____

Social Security Number: _____

Please circle the number next to the answer you choose.

1. What is your function?

- 1 Educator (a teacher, administrator, health educator, teacher aide, nurse, and other personnel who work in an instructional capacity)
- 2 Food service personnel (a person who is employed on a full or part-time basis in the supervision, preparation, planning, or service of meals for children)
- 3 Parent or guardian (natural or legal parent, foster parent and/or other adult with full responsibility for a child's care)
- 4 Other. Please specify: _____

2. For what type of facility do you work?

- | | |
|------------------------|--------------------------------|
| 1 Public school | 4 Family day home |
| 2 Private grade school | 5 RCCI |
| 3 Day care center | 6 Other. Please specify: _____ |

3. Are you a Summer Food Service Program Sponsor?

- 1 Yes
- 2 No

4. Approximately how many children do you care for? _____

5. Was the main purpose of the presentation stated clearly?

- 1 Yes
- 2 To Some Extent
- 3 No

6. Was the information presented relevant to your needs?

- 1 Yes
- 2 To Some Extent
- 3 No

7. What suggestions do you have for improving this presentation?

If you would like more information on the NET program please print your mailing address here:

CLASSROOM PRESENTATION REGISTRATION FORM

1. Title of Presentation: _____
2. Length of Presentation: ____ hours ____ minutes 3. Date: _____
4. Name of Presenter: _____
5. Title of Presenter: _____
6. Name of Facility: _____
7. Address of Facility: _____
Street or P.O. Box

City State Zip Code
8. Telephone Number of Facility: () _____
Area Code
9. Contact Person: _____
10. Type of facility. (Please circle the number next to the answer you choose.)
 - 1 Public school 4 Family Day Home
 - 2 Private school 5 RCCI
 - 3 Day care center 6 Other. Please specify: _____
11. In what food program(s) does the facility participate? (Please circle the number next to the answer you choose.)
 - 1 Child Care Food Program
 - 2 National School Lunch program
 - 3 School Breakfast Program
 - 4 Special Milk Program
 - 5 Summer Food Service Program
 - 6 None
12. Total Number of Students: _____
13. Age Range of Students: _____ 14. Grade Level: _____
15. Total Number of Students by Ethnic Origin (if available):
White _____ Black _____ Hispanic _____
Asian/Pacific Islander _____ American Indian/Alaskan Native _____

Developed January 92

LIBRARY EVALUATION FORM

Please fill out this form and return it with the material you borrowed. Your response will help us improve our services. This form is also used for statistical purposes.

General Information (please print)

Title of Borrowed Item: _____ Date: _____

Your Name: _____

Please circle the number next to the answer you choose.

1. For what type of facility do you work?

- | | | | |
|---|-----------------|---|------------------------------|
| 1 | Public school | 4 | Family day home |
| 2 | Private school | 5 | RCCI |
| 3 | Day care center | 6 | Other. Please specify: _____ |

2. What is your function?

- 1 Educator (a teacher, administrator, health educator, teacher aide, nurse, and other personnel who work in instructional capacity)
- 2 Food service personnel (a person who is employed on a full or part-time basis in the supervision, preparation, planning, or service of meals for children)
- 3 Parent (natural or legal parent, foster parent and/or other adult with responsibility for a child's care)
- 4 Other. Please specify: _____

3. Who and approximately how many saw the item borrowed?

	<u>WHO</u>	<u>HOW MANY</u>
1	Self	_____
2	Children in your facility	_____
3	Educators	_____
4	Food service personnel	_____
5	Parents	_____
6	Others. Please specify:	_____

4. How did you learn about the NET Library?

- 1 By attending a NET workshop
- 2 From a friend or co-worker
- 3 At a professional meeting or conference
- 4 Other. Please specify: _____

5. What is your overall rating of the borrowed item?

	Poor	Fair	Good	Excellent
The item's content	1	2	3	4
The way the content was presented	1	2	3	4
How useful was the item to those who saw or read it	1	2	3	4

THANK YOU!

**NET Library
Material Evaluation Form**

1. **Title:**
2. **Length:** (if video) _____ minutes
3. **Language:** ____English ____Spanish
4. **Target Group Choices** (may select more than one):
- | | |
|--|---|
| ☐ Prenatal | ☐ College Students |
| ☐ Preschool | ☐ Parents |
| ☐ Kindergarten | ☐ Teachers |
| ☐ Lower Elementary (grades 1-3) | ☐ General Adults |
| ☐ Upper Elementary (grades 4-6) | ☐ Food Service Personnel |
| ☐ Junior High (grades 7 & 8) | ☐ Nutritionist |
| ☐ High School (grades 9-12) | ☐ Child Care Provider |
| ☐ Elderly | |
5. **Numerical Evaluations:** Score from 1 to 5 with 1 being the lowest and 5 being the highest quality indicator.
- | | | | | | |
|-----------------------------------|---|---|---|---|---|
| Organization of Content | 1 | 2 | 3 | 4 | 5 |
| Accuracy | 1 | 2 | 3 | 4 | 5 |
| Motivational Level | 1 | 2 | 3 | 4 | 5 |
6. **Annotation:**
7. **Include in Catalog?** ____ yes ____ no
8. **Subjective Opinion:**
(ie, Did you like it? Is it one of the best on this subject? Would you recommend it? etc.)

9. **Evaluator:**

Name: _____

Date: _____

TEXAS



NUTRITION EDUCATION & TRAINING

Funded by the
Nutrition Education and Training Program
PL 85-188

The Texas Department of Human Services NET Program is committed to assuring that program benefits are made available to all persons and provided to all eligible individuals without regard to race, color, national origin, age, sex, disability, political belief or religion. Any person who believes that he or she has been discriminated against in any NET Program activity should immediately contact the Administrator, Food and Nutrition Service, 3101 Park Center Drive, Alexandria, Virginia 22302.

**TEXAS DEPARTMENT OF HUMAN SERVICES
1994**